

**1. Identification****Product identifier****Product Name** Durvet DuraFight For Cow Stress

Dist. By: Durvet, Inc.  
100 SE Magellan Dr.  
Blue Springs, MO 64014  
(800)821-5570

**Other means of identification****Product Code(s)** 2604**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended use** Livestock Feed Supplement.**Restrictions on use** Protect against direct sunlight, Keep out of reach of children**Details of the supplier of the safety data sheet**

| <b>Supplier</b>                                               | <b>Manufacturer Address</b>                                   |
|---------------------------------------------------------------|---------------------------------------------------------------|
| Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 | Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 |

**Emergency telephone number****Emergency Telephone** +1 800 533 5306**2. Hazard(s) identification****Classification**

|                                           |             |
|-------------------------------------------|-------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4  |
| Carcinogenicity                           | Category 1B |
| Combustible dust                          | Yes         |

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements****Danger****Hazard statements**

Harmful if inhaled  
May cause cancer  
May form combustible dust concentrations in air


**Appearance** No information available.

**Physical state** Solid

**Odor** Odorless

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves, protective clothing, eye protection and face protection

Avoid breathing dust, fume, gas, mist, vapors and spray

Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

**Unknown acute toxicity**

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Other information**

May be harmful if swallowed. May be harmful in contact with skin. Causes mild skin irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name                        | CAS No.    | Weight-% | Trade secret |
|--------------------------------------|------------|----------|--------------|
| Potassium Sulfate, Magnesium Sulfate | 14977-37-8 | 10-50    | *            |
| Calcium Carbonate                    | 471-34-1   | 10-50    | *            |
| Magnesium-Mica                       | NA         | 10-50    | *            |
| Potassium Chloride                   | 7447-40-7  | 0.5-25   | *            |
| Choline Chloride                     | 67-48-1    | 0.5-25   | *            |
| Diatomaceous Earth                   | 61790-53-2 | 0.5-25   | *            |
| Menadione Sodium Bisulfite Complex   | 130-37-0   | 0.5-25   | *            |
| Mineral Oil                          | 8042-47-5  | 0.5-25   | *            |
| Ferrous Sulfate                      | 17375-41-6 | 0.5-25   | *            |

| Chemical name                                                                                                                                                                                                     | CAS No.      | Weight-% | Trade secret |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|--------------|
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5   | 0.001-5  | *            |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1     | 0.001-5  | *            |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6      | 0.001-5  | *            |
| Rice Hulls                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Lactic Acid                                                                                                                                                                                                       | NA           | 0.001-5  | *            |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2    | 0.001-5  | *            |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9     | 0.001-5  | *            |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2    | 0.001-5  | *            |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8   | 0.001-5  | *            |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA           | 0.001-5  | *            |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA           | 0.001-5  | *            |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8    | 0.001-5  | *            |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A          | 0.001-5  | *            |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6     | 0.001-5  | *            |
| Dried Whey                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5      | 0.001-5  | *            |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0      | 0.001-5  | *            |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0    | 0.001-5  | *            |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9      | 0.001-5  | *            |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2   | 0.001-5  | *            |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA           | 0.001-5  | *            |
| Trade Secret                                                                                                                                                                                                      | Trade secret | 0.001-5  | *            |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA           | 0.001-5  | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

|                                           |                                                                                                                                                                  |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.                                                  |
| <b>Inhalation</b>                         | If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.            |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.                                             |
| <b>Skin contact</b>                       | Wash skin with soap and water.                                                                                                                                   |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.                                               |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing |

dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** Avoid generation of dust. Fine dust dispersed in air may ignite.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Avoid generation of dust. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up** Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

## 8. Exposure controls/personal protection

### Working area parameters, subject to mandatory control (MAC or TSEL)

#### Exposure Limits

| Chemical name                    | ACGIH TLV                                                                                                                  | OSHA PEL                                                                                                                                                                                                    | NIOSH                                                                                         |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |
| Diatomaceous Earth<br>61790-53-2 | -                                                                                                                          | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA | -                                                                                             |
| Ferrous Sulfate<br>17375-41-6    | TWA: 1 mg/m <sup>3</sup> Fe                                                                                                | (vacated) TWA: 1 mg/m <sup>3</sup> Fe                                                                                                                                                                       | TWA: 1 mg/m <sup>3</sup> Fe                                                                   |
| Manganese Sulfate<br>10034-96-5  | TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter<br>TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter | (vacated) Ceiling: 5 mg/m <sup>3</sup><br>Ceiling: 5 mg/m <sup>3</sup> Mn                                                                                                                                   | IDLH: 500 mg/m <sup>3</sup> Mn<br>TWA: 1 mg/m <sup>3</sup> Mn<br>STEL: 3 mg/m <sup>3</sup> Mn |
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |

| Chemical name                     | ACGIH TLV                                                                                                          | OSHA PEL                                                                                                                                                                                                                                                                                                                  | NIOSH                                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Zinc Oxide<br>1314-13-2           | STEL: 10 mg/m <sup>3</sup> respirable particulate matter<br>TWA: 2 mg/m <sup>3</sup> respirable particulate matter | TWA: 5 mg/m <sup>3</sup> fume<br>TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 5 mg/m <sup>3</sup> fume<br>(vacated) TWA: 10 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) STEL: 10 mg/m <sup>3</sup> fume | IDLH: 500 mg/m <sup>3</sup><br>Ceiling: 15 mg/m <sup>3</sup> dust<br>TWA: 5 mg/m <sup>3</sup> dust and fume<br>STEL: 10 mg/m <sup>3</sup> fume |
| Cobalt Carbonate<br>51839-24-8    | TWA: 0.02 mg/m <sup>3</sup> Co inhalable particulate matter                                                        | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Copper Sulfate<br>7758-99-8       | TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                                          | -                                                                                                                                                                                                                                                                                                                         | IDLH: 100 mg/m <sup>3</sup> Cu dust and mist<br>TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                      |
| Potassium Iodide<br>7681-11-0     | TWA: 0.01 ppm inhalable fraction and vapor                                                                         | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Vitamin B12 Supplement<br>68-19-9 | -                                                                                                                  | TWA: 5 mg/m <sup>3</sup> CN<br>(vacated) TWA: 5 mg/m <sup>3</sup> S* as CN                                                                                                                                                                                                                                                | IDLH: 25 mg/m <sup>3</sup> CN                                                                                                                  |
| Diatomaceous Earth<br>61790-53-2  | -                                                                                                                  | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA                                                                                                               | -                                                                                                                                              |

**Biological occupational exposure limits**

| Chemical name                  | ACGIH                                                      |
|--------------------------------|------------------------------------------------------------|
| Cobalt Carbonate<br>51839-24-8 | 15 µg/L - urine (Cobalt) - end of shift at end of workweek |

**Appropriate engineering controls**

**Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing.

|                                       |                                                                                                                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.                       |
| <b>General hygiene considerations</b> | Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray. |

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                       |                           |
|-----------------------|---------------------------|
| <b>Physical state</b> | Solid                     |
| <b>Appearance</b>     | No information available. |
| <b>Color</b>          | No information available  |
| <b>Odor</b>           | Odorless                  |
| <b>Odor threshold</b> | No information available. |

| <u>Property</u>                        | <u>Values</u>     | <u>Remarks • Method</u> |
|----------------------------------------|-------------------|-------------------------|
| pH                                     | No data available | None known              |
| Melting point / freezing point         | No data available | None known              |
| Boiling point / boiling range          | No data available | None known              |
| Flash point                            | No data available | None known              |
| Evaporation rate                       | No data available | None known              |
| Flammability                           | No data available | None known              |
| Flammability Limit in Air              |                   | None known              |
| Upper flammability or explosive limits | No data available |                         |
| Lower flammability or explosive limits | No data available |                         |
| Vapor pressure                         | No data available | None known              |
| Relative vapor density                 | No data available | None known              |
| Relative density                       | No data available | None known              |
| Water solubility                       | No data available | None known              |
| Solubility(ies)                        | No data available | None known              |
| Partition coefficient                  | No data available | None known              |
| Autoignition temperature               | No data available | None known              |
| Decomposition temperature              |                   | None known              |
| Kinematic viscosity                    | No data available | None known              |
| Dynamic viscosity                      | No data available | None known              |

### Other information

|                             |                           |
|-----------------------------|---------------------------|
| <b>Explosive properties</b> | No information available  |
| <b>Oxidizing properties</b> | No information available  |
| <b>Softening point</b>      | No information available. |
| <b>Molecular weight</b>     | No information available. |
| <b>VOC content</b>          | No information available  |
| <b>Liquid Density</b>       | No information available. |
| <b>Bulk density</b>         | No information available. |

## 10. Stability and reactivity

|                   |                           |
|-------------------|---------------------------|
| <b>Reactivity</b> | No information available. |
|-------------------|---------------------------|

|                                           |                                                 |
|-------------------------------------------|-------------------------------------------------|
| <b>Chemical stability</b>                 | Stable under normal conditions.                 |
| <b>Possibility of hazardous reactions</b> | None under normal processing.                   |
| <b>Conditions to avoid</b>                | Excessive heat. Heating in air. Dust formation. |
| <b>Incompatible materials</b>             | None known based on information supplied.       |
| <b>Hazardous decomposition products</b>   | None known based on information supplied.       |

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

|                     |                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components). |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available.                                                                                          |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes mild skin irritation. May be harmful in contact with skin.                        |
| <b>Ingestion</b>    | May be harmful if swallowed.                                                                                                                               |

### Symptoms related to the physical, chemical and toxicological characteristics

|                 |                                                                                |
|-----------------|--------------------------------------------------------------------------------|
| <b>Symptoms</b> | Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. |
|-----------------|--------------------------------------------------------------------------------|

### Acute toxicity

#### Numerical measures of toxicity

#### The following ATE values have been calculated for the mixture

|                                      |                |
|--------------------------------------|----------------|
| <b>ATEmix (oral)</b>                 | 3,628.80 mg/kg |
| <b>ATEmix (dermal)</b>               | 2,530.10 mg/kg |
| <b>ATEmix (inhalation-gas)</b>       | 99,999.00 ppm  |
| <b>ATEmix (inhalation-dust/mist)</b> | 3.80 mg/l      |
| <b>ATEmix (inhalation-vapor)</b>     | 99,999.00 mg/l |

#### Unknown acute toxicity

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Component Information

| Chemical name                   | Oral LD50            | Dermal LD50          | Inhalation LC50      |
|---------------------------------|----------------------|----------------------|----------------------|
| Calcium Carbonate<br>471-34-1   | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | > 3 mg/L ( Rat ) 4 h |
| Potassium Chloride<br>7447-40-7 | = 2600 mg/kg ( Rat ) | -                    | -                    |

| Chemical name                     | Oral LD50            | Dermal LD50                               | Inhalation LC50                      |
|-----------------------------------|----------------------|-------------------------------------------|--------------------------------------|
| Choline Chloride<br>67-48-1       | = 3400 mg/kg ( Rat ) | -                                         | -                                    |
| Mineral Oil<br>8042-47-5          | > 5000 mg/kg ( Rat ) | -                                         | -                                    |
| Ferrous Sulfate<br>17375-41-6     | = 319 mg/kg ( Rat )  | -                                         | -                                    |
| Manganese Sulfate<br>10034-96-5   | = 782 mg/kg ( Rat )  | -                                         | > 4.45 mg/L ( Rat ) 4 h              |
| Calcium Carbonate<br>471-34-1     | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 3 mg/L ( Rat ) 4 h                 |
| Niacin Supplement<br>59-67-6      | = 7 g/kg ( Rat )     | > 2000 mg/kg ( Rat )                      | > 3.8 mg/L ( Rat ) 4 h               |
| Vitamin E Supplement<br>7695-91-2 | -                    | > 3000 mg/kg ( Rat )                      | -                                    |
| Vitamin A Supplement<br>127-47-9  | = 4980 mg/kg ( Rat ) | -                                         | -                                    |
| Zinc Oxide<br>1314-13-2           | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 5700 mg/m <sup>3</sup> ( Rat ) 4 h |
| Copper Sulfate<br>7758-99-8       | = 960 mg/kg ( Rat )  | > 8 g/kg ( Rabbit )                       | -                                    |
| Calcium Pantothenate<br>137-08-6  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Riboflavin Supplement<br>83-88-5  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Vitamin D3 Supplement<br>67-97-0  | = 42 mg/kg ( Rat )   | = 61 mg/kg ( Rat )<br>= 185 mg/kg ( Rat ) | 0.13 - 0.38 mg/L ( Rat ) 4 h         |
| Potassium Iodide<br>7681-11-0     | -                    | > 2000 mg/kg ( Rat )                      | -                                    |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. May cause skin irritation.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name                         | ACGIH | IARC    | NTP | OSHA |
|---------------------------------------|-------|---------|-----|------|
| Diatomaceous Earth<br>61790-53-2      | -     | Group 3 | -   | X    |
| Menadione Sodium<br>Bisulfite Complex | -     | Group 3 | -   | -    |

| Chemical name                     | ACGIH | IARC     | NTP                    | OSHA |
|-----------------------------------|-------|----------|------------------------|------|
| 130-37-0                          |       |          |                        |      |
| Cobalt Carbonate<br>51839-24-8    | A3    | Group 2B | Reasonably Anticipated | X    |
| Vitamin B12 Supplement<br>68-19-9 | -     | Group 2B | Reasonably Anticipated | X    |
| Diatomaceous Earth<br>61790-53-2  | -     | Group 3  | -                      | X    |

**Legend**
**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

**NTP (National Toxicology Program)**

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**Occupational Safety and Health Administration of the US Department of Labor**

X - Present

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target organ effects** Liver, Respiratory system, Eyes, Skin, Gastrointestinal tract (GI).

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

**12. Ecological information**
**Ecotoxicity** Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

| Chemical name                   | Algae/aquatic plants                              | Fish                                                                        | Toxicity to microorganisms | Crustacea                                                                       |
|---------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------|
| Potassium Chloride<br>7447-40-7 | EC50: =2500mg/L (72h,<br>Desmodesmus subspicatus) | LC50: 750 - 1020mg/L<br>(96h, Pimephales promelas)<br>LC50: =1060mg/L (96h, | -                          | EC50: =825mg/L (48h,<br>Daphnia magna)<br>EC50: =83mg/L (48h,<br>Daphnia magna) |

| Chemical name                     | Algae/aquatic plants                           | Fish                                                                                                                                                                                                                                                                                                        | Toxicity to microorganisms | Crustacea                                                                                      |
|-----------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------|
|                                   |                                                | Lepomis macrochirus)                                                                                                                                                                                                                                                                                        |                            |                                                                                                |
| Choline Chloride<br>67-48-1       | EC50: >500mg/L (72h, Desmodemus subspicatus)   | -                                                                                                                                                                                                                                                                                                           | -                          | EC50: >320mg/L (48h, Daphnia magna)<br>EC50: >500mg/L (48h, Daphnia magna Straus)              |
| Mineral Oil<br>8042-47-5          | -                                              | LC50: >10000mg/L (96h, Lepomis macrochirus)                                                                                                                                                                                                                                                                 | -                          | -                                                                                              |
| Ferrous Sulfate<br>17375-41-6     | -                                              | LC50: =0.56mg/L (96h, Cyprinus carpio)<br>LC50: =925mg/L (96h, Poecilia reticulata)                                                                                                                                                                                                                         | -                          | EC50: 6.15 - 9.26mg/L (48h, Daphnia magna)<br>EC50: =152mg/L (48h, Daphnia magna)              |
| Niacin Supplement<br>59-67-6      | EC50: =89.93mg/L (72h, Desmodemus subspicatus) | LC50: =520mg/L (96h, Salmo trutta)                                                                                                                                                                                                                                                                          | -                          | EC50: =77mg/L (48h, Daphnia magna)                                                             |
| Vitamin E Supplement<br>7695-91-2 | -                                              | LC50: >100mg/L (96h, Oncorhynchus mykiss)                                                                                                                                                                                                                                                                   | -                          | -                                                                                              |
| Vitamin A Supplement<br>127-47-9  | -                                              | LC50: =1.37mg/L (96h, Oncorhynchus mykiss)                                                                                                                                                                                                                                                                  | -                          | -                                                                                              |
| Zinc Oxide<br>1314-13-2           | -                                              | LC50: =1.55mg/L (96h, Danio rerio)                                                                                                                                                                                                                                                                          | -                          | -                                                                                              |
| Copper Sulfate<br>7758-99-8       | -                                              | LC50: 0.09 - 0.19mg/L (96h, Oncorhynchus mykiss)<br>LC50: 0.1478 - 0.165mg/L (96h, Oncorhynchus mykiss)<br>LC50: 0.66 - 1.15mg/L (96h, Lepomis macrochirus)<br>LC50: 0.96 - 1.8mg/L (96h, Lepomis macrochirus)<br>LC50: =0.1mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.6752mg/L (96h, Pimephales promelas) | -                          | EC50: 0.0058 - 0.0073mg/L (48h, Daphnia magna)<br>EC50: 0.147 - 0.227mg/L (48h, Daphnia magna) |
| Potassium Iodide<br>7681-11-0     | -                                              | LC50: >100mg/L (96h, Danio rerio)                                                                                                                                                                                                                                                                           | -                          | -                                                                                              |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

| Chemical name               | Partition coefficient |
|-----------------------------|-----------------------|
| Choline Chloride<br>67-48-1 | -3.77                 |
| Mineral Oil<br>8042-47-5    | >6                    |
| Niacin Supplement           | -0.59                 |

| Chemical name                     | Partition coefficient |
|-----------------------------------|-----------------------|
| 59-67-6                           |                       |
| Vitamin A Supplement<br>127-47-9  | 9.4                   |
| Vitamin B12 Supplement<br>68-19-9 | 3.57                  |

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

### 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated

Technical Name

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

### 15. Regulatory information

#### International Inventories

**TSCA** Contact supplier for inventory compliance status.

| Chemical name                                                                                                                                                                                                     | CAS No.    | Inventory Listing Status | Commercial Activity Designation |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------|
| Potassium Sulfate, Magnesium Sulfate                                                                                                                                                                              | 14977-37-8 | -                        | Unknown                         |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Magnesium-Mica                                                                                                                                                                                                    | NA         | -                        | Unknown                         |
| Potassium Chloride                                                                                                                                                                                                | 7447-40-7  | Present                  | Active                          |
| Choline Chloride                                                                                                                                                                                                  | 67-48-1    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Menadione Sodium Bisulfite Complex                                                                                                                                                                                | 130-37-0   | Present                  | Active                          |
| Mineral Oil                                                                                                                                                                                                       | 8042-47-5  | Present                  | Active                          |
| Ferrous Sulfate                                                                                                                                                                                                   | 17375-41-6 | Present                  | Active                          |
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5 | Present                  | Active                          |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6    | Present                  | Active                          |
| Rice Hulls                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Lactic Acid                                                                                                                                                                                                       | NA         | -                        | Unknown                         |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2  | Present                  | Active                          |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9   | Present                  | Active                          |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2  | Present                  | Active                          |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8 | Present                  | Active                          |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA         | -                        | Unknown                         |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA         | -                        | Unknown                         |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8  | Present                  | Active                          |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A        | -                        | Unknown                         |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6   | Present                  | Active                          |
| Dried Whey                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5    | Present                  | Active                          |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0    | Present                  | Active                          |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0  | Present                  | Active                          |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Trade Secret                                                                                                                                                                                                      | -          | Present                  | Active                          |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA         | -                        | Unknown                         |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA         | -                        | Unknown                         |

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

**DSL/NDL**  
**EINECS/ELINCS**  
**ENCS**  
**IECSC**  
**KECL**  
**PICCS**  
**AIIC**

Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

**US Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name                    | SARA 313 - Threshold Values % |
|----------------------------------|-------------------------------|
| Manganese Sulfate - 10034-96-5   | 1.0                           |
| Zinc Oxide - 1314-13-2           | 1.0                           |
| Cobalt Carbonate - 51839-24-8    | 0.1                           |
| Copper Sulfate - 7758-99-8       | 1.0                           |
| Vitamin B12 Supplement - 68-19-9 | 1.0                           |
|                                  | 0.1                           |

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name                     | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-----------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Ferrous Sulfate<br>17375-41-6     | 1000 lb                     | -                      | -                         | X                          |
| Zinc Oxide<br>1314-13-2           | -                           | X                      | -                         | -                          |
| Copper Sulfate<br>7758-99-8       | 10 lb                       | X                      | -                         | X                          |
| Vitamin B12 Supplement<br>68-19-9 | -                           | X                      | X                         | -                          |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ) |
|---------------|--------------------------|------------------------------------|--------------------------|
|---------------|--------------------------|------------------------------------|--------------------------|

| Chemical name                 | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ)                  |
|-------------------------------|--------------------------|------------------------------------|-------------------------------------------|
| Ferrous Sulfate<br>17375-41-6 | 1000 lb                  | -                                  | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Copper Sulfate<br>7758-99-8   | 10 lb                    | -                                  | RQ 10 lb final RQ<br>RQ 4.54 kg final RQ  |

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

| Chemical name                     | New Jersey | Massachusetts | Pennsylvania |
|-----------------------------------|------------|---------------|--------------|
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Diatomaceous Earth<br>61790-53-2  | X          | -             | -            |
| Ferrous Sulfate<br>17375-41-6     | X          | X             | X            |
| Manganese Sulfate<br>10034-96-5   | X          | -             | X            |
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Zinc Oxide<br>1314-13-2           | X          | X             | X            |
| Cobalt Carbonate<br>51839-24-8    | X          | -             | X            |
| Copper Sulfate<br>7758-99-8       | X          | X             | X            |
| Vitamin B12 Supplement<br>68-19-9 | X          | -             | X            |

### U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

## **16. Other information**

|                                   |                          |                           |                           |                              |
|-----------------------------------|--------------------------|---------------------------|---------------------------|------------------------------|
| <b>NFPA</b>                       | <b>Health hazards</b> 2  | <b>Flammability</b> 1     | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b>                       | <b>Health hazards</b> 1* | <b>Flammability</b> 0     | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |
| <i>Chronic Hazard Star Legend</i> |                          | * = Chronic Health Hazard |                           |                              |

### Key or legend to abbreviations and acronyms used in the safety data sheet

**Legend Section 8: Exposure controls/personal protection**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling                      Maximum limit value                      \*                      Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date**                      28-Jul-2026

**Revision Note**                      No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of Ralco's knowledge, information and belief at the date of preparation. The information provided is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The conditions or methods of said handling, storage, use, and disposal of this product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expenses arising out of or connected with the handling, storage, use, or disposal of this product. The information provided relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



**1. Identification****Product identifier**

**Product Name** Durvet DuraFight For Cow Stress

**Other means of identification**

**Product Code(s)** 2604

**Synonyms** None

**Recommended use of the chemical and restrictions on use**

**Recommended use** Livestock Feed Supplement.

**Restrictions on use** Protect against direct sunlight, Keep out of reach of children

**Details of the supplier of the safety data sheet**

| <b>Supplier</b>                                               | <b>Manufacturer Address</b>                                   |
|---------------------------------------------------------------|---------------------------------------------------------------|
| Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 | Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 |

**Emergency telephone number**

**Emergency Telephone** +1 800 533 5306

**2. Hazard(s) identification****Classification**

|                                           |             |
|-------------------------------------------|-------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4  |
| Carcinogenicity                           | Category 1B |
| Combustible dust                          | Yes         |

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements**

**Danger**

**Hazard statements**

Harmful if inhaled  
May cause cancer  
May form combustible dust concentrations in air


**Appearance** No information available.

**Physical state** Solid

**Odor** Odorless

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves, protective clothing, eye protection and face protection

Avoid breathing dust, fume, gas, mist, vapors and spray

Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

**Unknown acute toxicity**

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Other information**

May be harmful if swallowed. May be harmful in contact with skin. Causes mild skin irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name                        | CAS No.    | Weight-% | Trade secret |
|--------------------------------------|------------|----------|--------------|
| Potassium Sulfate, Magnesium Sulfate | 14977-37-8 | 10-50    | *            |
| Calcium Carbonate                    | 471-34-1   | 10-50    | *            |
| Magnesium-Mica                       | NA         | 10-50    | *            |
| Potassium Chloride                   | 7447-40-7  | 0.5-25   | *            |
| Choline Chloride                     | 67-48-1    | 0.5-25   | *            |
| Diatomaceous Earth                   | 61790-53-2 | 0.5-25   | *            |
| Menadione Sodium Bisulfite Complex   | 130-37-0   | 0.5-25   | *            |
| Mineral Oil                          | 8042-47-5  | 0.5-25   | *            |
| Ferrous Sulfate                      | 17375-41-6 | 0.5-25   | *            |

| Chemical name                                                                                                                                                                                                     | CAS No.      | Weight-% | Trade secret |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|--------------|
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5   | 0.001-5  | *            |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1     | 0.001-5  | *            |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6      | 0.001-5  | *            |
| Rice Hulls                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Lactic Acid                                                                                                                                                                                                       | NA           | 0.001-5  | *            |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2    | 0.001-5  | *            |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9     | 0.001-5  | *            |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2    | 0.001-5  | *            |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8   | 0.001-5  | *            |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA           | 0.001-5  | *            |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA           | 0.001-5  | *            |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8    | 0.001-5  | *            |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A          | 0.001-5  | *            |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6     | 0.001-5  | *            |
| Dried Whey                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5      | 0.001-5  | *            |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0      | 0.001-5  | *            |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0    | 0.001-5  | *            |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9      | 0.001-5  | *            |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2   | 0.001-5  | *            |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA           | 0.001-5  | *            |
| Trade Secret                                                                                                                                                                                                      | Trade secret | 0.001-5  | *            |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA           | 0.001-5  | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

|                                           |                                                                                                                                                                  |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.                                                  |
| <b>Inhalation</b>                         | If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.            |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.                                             |
| <b>Skin contact</b>                       | Wash skin with soap and water.                                                                                                                                   |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.                                               |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing |

dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** Avoid generation of dust. Fine dust dispersed in air may ignite.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Avoid generation of dust. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up** Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

## 8. Exposure controls/personal protection

### Working area parameters, subject to mandatory control (MAC or TSEL)

#### Exposure Limits

| Chemical name                    | ACGIH TLV                                                                                                                  | OSHA PEL                                                                                                                                                                                                    | NIOSH                                                                                         |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |
| Diatomaceous Earth<br>61790-53-2 | -                                                                                                                          | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA | -                                                                                             |
| Ferrous Sulfate<br>17375-41-6    | TWA: 1 mg/m <sup>3</sup> Fe                                                                                                | (vacated) TWA: 1 mg/m <sup>3</sup> Fe                                                                                                                                                                       | TWA: 1 mg/m <sup>3</sup> Fe                                                                   |
| Manganese Sulfate<br>10034-96-5  | TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter<br>TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter | (vacated) Ceiling: 5 mg/m <sup>3</sup><br>Ceiling: 5 mg/m <sup>3</sup> Mn                                                                                                                                   | IDLH: 500 mg/m <sup>3</sup> Mn<br>TWA: 1 mg/m <sup>3</sup> Mn<br>STEL: 3 mg/m <sup>3</sup> Mn |
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |

| Chemical name                     | ACGIH TLV                                                                                                          | OSHA PEL                                                                                                                                                                                                                                                                                                                  | NIOSH                                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Zinc Oxide<br>1314-13-2           | STEL: 10 mg/m <sup>3</sup> respirable particulate matter<br>TWA: 2 mg/m <sup>3</sup> respirable particulate matter | TWA: 5 mg/m <sup>3</sup> fume<br>TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 5 mg/m <sup>3</sup> fume<br>(vacated) TWA: 10 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) STEL: 10 mg/m <sup>3</sup> fume | IDLH: 500 mg/m <sup>3</sup><br>Ceiling: 15 mg/m <sup>3</sup> dust<br>TWA: 5 mg/m <sup>3</sup> dust and fume<br>STEL: 10 mg/m <sup>3</sup> fume |
| Cobalt Carbonate<br>51839-24-8    | TWA: 0.02 mg/m <sup>3</sup> Co inhalable particulate matter                                                        | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Copper Sulfate<br>7758-99-8       | TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                                          | -                                                                                                                                                                                                                                                                                                                         | IDLH: 100 mg/m <sup>3</sup> Cu dust and mist<br>TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                      |
| Potassium Iodide<br>7681-11-0     | TWA: 0.01 ppm inhalable fraction and vapor                                                                         | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Vitamin B12 Supplement<br>68-19-9 | -                                                                                                                  | TWA: 5 mg/m <sup>3</sup> CN<br>(vacated) TWA: 5 mg/m <sup>3</sup> S* as CN                                                                                                                                                                                                                                                | IDLH: 25 mg/m <sup>3</sup> CN                                                                                                                  |
| Diatomaceous Earth<br>61790-53-2  | -                                                                                                                  | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA                                                                                                               | -                                                                                                                                              |

**Biological occupational exposure limits**

| Chemical name                  | ACGIH                                                      |
|--------------------------------|------------------------------------------------------------|
| Cobalt Carbonate<br>51839-24-8 | 15 µg/L - urine (Cobalt) - end of shift at end of workweek |

**Appropriate engineering controls**

**Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing.

|                                       |                                                                                                                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.                       |
| <b>General hygiene considerations</b> | Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray. |

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                       |                           |
|-----------------------|---------------------------|
| <b>Physical state</b> | Solid                     |
| <b>Appearance</b>     | No information available. |
| <b>Color</b>          | No information available  |
| <b>Odor</b>           | Odorless                  |
| <b>Odor threshold</b> | No information available. |

| <u>Property</u>                        | <u>Values</u>     | <u>Remarks • Method</u> |
|----------------------------------------|-------------------|-------------------------|
| pH                                     | No data available | None known              |
| Melting point / freezing point         | No data available | None known              |
| Boiling point / boiling range          | No data available | None known              |
| Flash point                            | No data available | None known              |
| Evaporation rate                       | No data available | None known              |
| Flammability                           | No data available | None known              |
| Flammability Limit in Air              |                   | None known              |
| Upper flammability or explosive limits | No data available |                         |
| Lower flammability or explosive limits | No data available |                         |
| Vapor pressure                         | No data available | None known              |
| Relative vapor density                 | No data available | None known              |
| Relative density                       | No data available | None known              |
| Water solubility                       | No data available | None known              |
| Solubility(ies)                        | No data available | None known              |
| Partition coefficient                  | No data available | None known              |
| Autoignition temperature               | No data available | None known              |
| Decomposition temperature              |                   | None known              |
| Kinematic viscosity                    | No data available | None known              |
| Dynamic viscosity                      | No data available | None known              |

### Other information

|                             |                           |
|-----------------------------|---------------------------|
| <b>Explosive properties</b> | No information available  |
| <b>Oxidizing properties</b> | No information available  |
| <b>Softening point</b>      | No information available. |
| <b>Molecular weight</b>     | No information available. |
| <b>VOC content</b>          | No information available  |
| <b>Liquid Density</b>       | No information available. |
| <b>Bulk density</b>         | No information available. |

## 10. Stability and reactivity

|                   |                           |
|-------------------|---------------------------|
| <b>Reactivity</b> | No information available. |
|-------------------|---------------------------|

|                                           |                                                 |
|-------------------------------------------|-------------------------------------------------|
| <b>Chemical stability</b>                 | Stable under normal conditions.                 |
| <b>Possibility of hazardous reactions</b> | None under normal processing.                   |
| <b>Conditions to avoid</b>                | Excessive heat. Heating in air. Dust formation. |
| <b>Incompatible materials</b>             | None known based on information supplied.       |
| <b>Hazardous decomposition products</b>   | None known based on information supplied.       |

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

|                     |                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components). |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available.                                                                                          |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes mild skin irritation. May be harmful in contact with skin.                        |
| <b>Ingestion</b>    | May be harmful if swallowed.                                                                                                                               |

### Symptoms related to the physical, chemical and toxicological characteristics

|                 |                                                                                |
|-----------------|--------------------------------------------------------------------------------|
| <b>Symptoms</b> | Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. |
|-----------------|--------------------------------------------------------------------------------|

### Acute toxicity

#### Numerical measures of toxicity

#### The following ATE values have been calculated for the mixture

|                                      |                |
|--------------------------------------|----------------|
| <b>ATEmix (oral)</b>                 | 3,628.80 mg/kg |
| <b>ATEmix (dermal)</b>               | 2,530.10 mg/kg |
| <b>ATEmix (inhalation-gas)</b>       | 99,999.00 ppm  |
| <b>ATEmix (inhalation-dust/mist)</b> | 3.80 mg/l      |
| <b>ATEmix (inhalation-vapor)</b>     | 99,999.00 mg/l |

#### Unknown acute toxicity

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Component Information

| Chemical name                   | Oral LD50            | Dermal LD50          | Inhalation LC50      |
|---------------------------------|----------------------|----------------------|----------------------|
| Calcium Carbonate<br>471-34-1   | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | > 3 mg/L ( Rat ) 4 h |
| Potassium Chloride<br>7447-40-7 | = 2600 mg/kg ( Rat ) | -                    | -                    |

| Chemical name                     | Oral LD50            | Dermal LD50                               | Inhalation LC50                      |
|-----------------------------------|----------------------|-------------------------------------------|--------------------------------------|
| Choline Chloride<br>67-48-1       | = 3400 mg/kg ( Rat ) | -                                         | -                                    |
| Mineral Oil<br>8042-47-5          | > 5000 mg/kg ( Rat ) | -                                         | -                                    |
| Ferrous Sulfate<br>17375-41-6     | = 319 mg/kg ( Rat )  | -                                         | -                                    |
| Manganese Sulfate<br>10034-96-5   | = 782 mg/kg ( Rat )  | -                                         | > 4.45 mg/L ( Rat ) 4 h              |
| Calcium Carbonate<br>471-34-1     | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 3 mg/L ( Rat ) 4 h                 |
| Niacin Supplement<br>59-67-6      | = 7 g/kg ( Rat )     | > 2000 mg/kg ( Rat )                      | > 3.8 mg/L ( Rat ) 4 h               |
| Vitamin E Supplement<br>7695-91-2 | -                    | > 3000 mg/kg ( Rat )                      | -                                    |
| Vitamin A Supplement<br>127-47-9  | = 4980 mg/kg ( Rat ) | -                                         | -                                    |
| Zinc Oxide<br>1314-13-2           | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 5700 mg/m <sup>3</sup> ( Rat ) 4 h |
| Copper Sulfate<br>7758-99-8       | = 960 mg/kg ( Rat )  | > 8 g/kg ( Rabbit )                       | -                                    |
| Calcium Pantothenate<br>137-08-6  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Riboflavin Supplement<br>83-88-5  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Vitamin D3 Supplement<br>67-97-0  | = 42 mg/kg ( Rat )   | = 61 mg/kg ( Rat )<br>= 185 mg/kg ( Rat ) | 0.13 - 0.38 mg/L ( Rat ) 4 h         |
| Potassium Iodide<br>7681-11-0     | -                    | > 2000 mg/kg ( Rat )                      | -                                    |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. May cause skin irritation.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name                         | ACGIH | IARC    | NTP | OSHA |
|---------------------------------------|-------|---------|-----|------|
| Diatomaceous Earth<br>61790-53-2      | -     | Group 3 | -   | X    |
| Menadione Sodium<br>Bisulfite Complex | -     | Group 3 | -   | -    |

| Chemical name                     | ACGIH | IARC     | NTP                    | OSHA |
|-----------------------------------|-------|----------|------------------------|------|
| 130-37-0                          |       |          |                        |      |
| Cobalt Carbonate<br>51839-24-8    | A3    | Group 2B | Reasonably Anticipated | X    |
| Vitamin B12 Supplement<br>68-19-9 | -     | Group 2B | Reasonably Anticipated | X    |
| Diatomaceous Earth<br>61790-53-2  | -     | Group 3  | -                      | X    |

**Legend**
**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

**NTP (National Toxicology Program)**

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**Occupational Safety and Health Administration of the US Department of Labor**

X - Present

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target organ effects** Liver, Respiratory system, Eyes, Skin, Gastrointestinal tract (GI).

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

**12. Ecological information**
**Ecotoxicity** Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

| Chemical name                   | Algae/aquatic plants                              | Fish                                                                        | Toxicity to microorganisms | Crustacea                                                                       |
|---------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------|
| Potassium Chloride<br>7447-40-7 | EC50: =2500mg/L (72h,<br>Desmodesmus subspicatus) | LC50: 750 - 1020mg/L<br>(96h, Pimephales promelas)<br>LC50: =1060mg/L (96h, | -                          | EC50: =825mg/L (48h,<br>Daphnia magna)<br>EC50: =83mg/L (48h,<br>Daphnia magna) |

| Chemical name                     | Algae/aquatic plants                           | Fish                                                                                                                                                                                                                                                                                                        | Toxicity to microorganisms | Crustacea                                                                                      |
|-----------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------|
|                                   |                                                | Lepomis macrochirus)                                                                                                                                                                                                                                                                                        |                            |                                                                                                |
| Choline Chloride<br>67-48-1       | EC50: >500mg/L (72h, Desmodemus subspicatus)   | -                                                                                                                                                                                                                                                                                                           | -                          | EC50: >320mg/L (48h, Daphnia magna)<br>EC50: >500mg/L (48h, Daphnia magna Straus)              |
| Mineral Oil<br>8042-47-5          | -                                              | LC50: >10000mg/L (96h, Lepomis macrochirus)                                                                                                                                                                                                                                                                 | -                          | -                                                                                              |
| Ferrous Sulfate<br>17375-41-6     | -                                              | LC50: =0.56mg/L (96h, Cyprinus carpio)<br>LC50: =925mg/L (96h, Poecilia reticulata)                                                                                                                                                                                                                         | -                          | EC50: 6.15 - 9.26mg/L (48h, Daphnia magna)<br>EC50: =152mg/L (48h, Daphnia magna)              |
| Niacin Supplement<br>59-67-6      | EC50: =89.93mg/L (72h, Desmodemus subspicatus) | LC50: =520mg/L (96h, Salmo trutta)                                                                                                                                                                                                                                                                          | -                          | EC50: =77mg/L (48h, Daphnia magna)                                                             |
| Vitamin E Supplement<br>7695-91-2 | -                                              | LC50: >100mg/L (96h, Oncorhynchus mykiss)                                                                                                                                                                                                                                                                   | -                          | -                                                                                              |
| Vitamin A Supplement<br>127-47-9  | -                                              | LC50: =1.37mg/L (96h, Oncorhynchus mykiss)                                                                                                                                                                                                                                                                  | -                          | -                                                                                              |
| Zinc Oxide<br>1314-13-2           | -                                              | LC50: =1.55mg/L (96h, Danio rerio)                                                                                                                                                                                                                                                                          | -                          | -                                                                                              |
| Copper Sulfate<br>7758-99-8       | -                                              | LC50: 0.09 - 0.19mg/L (96h, Oncorhynchus mykiss)<br>LC50: 0.1478 - 0.165mg/L (96h, Oncorhynchus mykiss)<br>LC50: 0.66 - 1.15mg/L (96h, Lepomis macrochirus)<br>LC50: 0.96 - 1.8mg/L (96h, Lepomis macrochirus)<br>LC50: =0.1mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.6752mg/L (96h, Pimephales promelas) | -                          | EC50: 0.0058 - 0.0073mg/L (48h, Daphnia magna)<br>EC50: 0.147 - 0.227mg/L (48h, Daphnia magna) |
| Potassium Iodide<br>7681-11-0     | -                                              | LC50: >100mg/L (96h, Danio rerio)                                                                                                                                                                                                                                                                           | -                          | -                                                                                              |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

| Chemical name               | Partition coefficient |
|-----------------------------|-----------------------|
| Choline Chloride<br>67-48-1 | -3.77                 |
| Mineral Oil<br>8042-47-5    | >6                    |
| Niacin Supplement           | -0.59                 |

| Chemical name                     | Partition coefficient |
|-----------------------------------|-----------------------|
| 59-67-6                           |                       |
| Vitamin A Supplement<br>127-47-9  | 9.4                   |
| Vitamin B12 Supplement<br>68-19-9 | 3.57                  |

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

### 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated

Technical Name

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

### 15. Regulatory information

#### International Inventories

**TSCA** Contact supplier for inventory compliance status.

| Chemical name                                                                                                                                                                                                     | CAS No.    | Inventory Listing Status | Commercial Activity Designation |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------|
| Potassium Sulfate, Magnesium Sulfate                                                                                                                                                                              | 14977-37-8 | -                        | Unknown                         |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Magnesium-Mica                                                                                                                                                                                                    | NA         | -                        | Unknown                         |
| Potassium Chloride                                                                                                                                                                                                | 7447-40-7  | Present                  | Active                          |
| Choline Chloride                                                                                                                                                                                                  | 67-48-1    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Menadione Sodium Bisulfite Complex                                                                                                                                                                                | 130-37-0   | Present                  | Active                          |
| Mineral Oil                                                                                                                                                                                                       | 8042-47-5  | Present                  | Active                          |
| Ferrous Sulfate                                                                                                                                                                                                   | 17375-41-6 | Present                  | Active                          |
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5 | Present                  | Active                          |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6    | Present                  | Active                          |
| Rice Hulls                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Lactic Acid                                                                                                                                                                                                       | NA         | -                        | Unknown                         |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2  | Present                  | Active                          |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9   | Present                  | Active                          |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2  | Present                  | Active                          |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8 | Present                  | Active                          |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA         | -                        | Unknown                         |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA         | -                        | Unknown                         |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8  | Present                  | Active                          |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A        | -                        | Unknown                         |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6   | Present                  | Active                          |
| Dried Whey                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5    | Present                  | Active                          |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0    | Present                  | Active                          |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0  | Present                  | Active                          |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Trade Secret                                                                                                                                                                                                      | -          | Present                  | Active                          |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA         | -                        | Unknown                         |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA         | -                        | Unknown                         |

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

**DSL/NDL**  
**EINECS/ELINCS**  
**ENCS**  
**IECSC**  
**KECL**  
**PICCS**  
**AIIC**

Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

**US Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name                    | SARA 313 - Threshold Values % |
|----------------------------------|-------------------------------|
| Manganese Sulfate - 10034-96-5   | 1.0                           |
| Zinc Oxide - 1314-13-2           | 1.0                           |
| Cobalt Carbonate - 51839-24-8    | 0.1                           |
| Copper Sulfate - 7758-99-8       | 1.0                           |
| Vitamin B12 Supplement - 68-19-9 | 1.0                           |
|                                  | 0.1                           |

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name                     | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-----------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Ferrous Sulfate<br>17375-41-6     | 1000 lb                     | -                      | -                         | X                          |
| Zinc Oxide<br>1314-13-2           | -                           | X                      | -                         | -                          |
| Copper Sulfate<br>7758-99-8       | 10 lb                       | X                      | -                         | X                          |
| Vitamin B12 Supplement<br>68-19-9 | -                           | X                      | X                         | -                          |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ) |
|---------------|--------------------------|------------------------------------|--------------------------|
|---------------|--------------------------|------------------------------------|--------------------------|

| Chemical name                 | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ)                  |
|-------------------------------|--------------------------|------------------------------------|-------------------------------------------|
| Ferrous Sulfate<br>17375-41-6 | 1000 lb                  | -                                  | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Copper Sulfate<br>7758-99-8   | 10 lb                    | -                                  | RQ 10 lb final RQ<br>RQ 4.54 kg final RQ  |

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

| Chemical name                     | New Jersey | Massachusetts | Pennsylvania |
|-----------------------------------|------------|---------------|--------------|
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Diatomaceous Earth<br>61790-53-2  | X          | -             | -            |
| Ferrous Sulfate<br>17375-41-6     | X          | X             | X            |
| Manganese Sulfate<br>10034-96-5   | X          | -             | X            |
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Zinc Oxide<br>1314-13-2           | X          | X             | X            |
| Cobalt Carbonate<br>51839-24-8    | X          | -             | X            |
| Copper Sulfate<br>7758-99-8       | X          | X             | X            |
| Vitamin B12 Supplement<br>68-19-9 | X          | -             | X            |

### U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

## **16. Other information**

|                                   |                          |                           |                           |                              |
|-----------------------------------|--------------------------|---------------------------|---------------------------|------------------------------|
| <b>NFPA</b>                       | <b>Health hazards</b> 2  | <b>Flammability</b> 1     | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b>                       | <b>Health hazards</b> 1* | <b>Flammability</b> 0     | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |
| <i>Chronic Hazard Star Legend</i> |                          | * = Chronic Health Hazard |                           |                              |

### Key or legend to abbreviations and acronyms used in the safety data sheet

**Legend Section 8: Exposure controls/personal protection**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling                      Maximum limit value                      \*                      Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date**                      28-Jul-2026

**Revision Note**                      No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of Ralco's knowledge, information and belief at the date of preparation. The information provided is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The conditions or methods of said handling, storage, use, and disposal of this product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expenses arising out of or connected with the handling, storage, use, or disposal of this product. The information provided relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



**1. Identification****Product identifier****Product Name** Durvet DuraFight For Cow Stress**Other means of identification****Product Code(s)** 2604**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended use** Livestock Feed Supplement.**Restrictions on use** Protect against direct sunlight, Keep out of reach of children**Details of the supplier of the safety data sheet**

| <b>Supplier</b>                                               | <b>Manufacturer Address</b>                                   |
|---------------------------------------------------------------|---------------------------------------------------------------|
| Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 | Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 |

**Emergency telephone number****Emergency Telephone** +1 800 533 5306**2. Hazard(s) identification****Classification**

|                                           |             |
|-------------------------------------------|-------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4  |
| Carcinogenicity                           | Category 1B |
| Combustible dust                          | Yes         |

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements****Danger****Hazard statements**Harmful if inhaled  
May cause cancer  
May form combustible dust concentrations in air


**Appearance** No information available.

**Physical state** Solid

**Odor** Odorless

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves, protective clothing, eye protection and face protection

Avoid breathing dust, fume, gas, mist, vapors and spray

Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

**Unknown acute toxicity**

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Other information**

May be harmful if swallowed. May be harmful in contact with skin. Causes mild skin irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name                        | CAS No.    | Weight-% | Trade secret |
|--------------------------------------|------------|----------|--------------|
| Potassium Sulfate, Magnesium Sulfate | 14977-37-8 | 10-50    | *            |
| Calcium Carbonate                    | 471-34-1   | 10-50    | *            |
| Magnesium-Mica                       | NA         | 10-50    | *            |
| Potassium Chloride                   | 7447-40-7  | 0.5-25   | *            |
| Choline Chloride                     | 67-48-1    | 0.5-25   | *            |
| Diatomaceous Earth                   | 61790-53-2 | 0.5-25   | *            |
| Menadione Sodium Bisulfite Complex   | 130-37-0   | 0.5-25   | *            |
| Mineral Oil                          | 8042-47-5  | 0.5-25   | *            |
| Ferrous Sulfate                      | 17375-41-6 | 0.5-25   | *            |

| Chemical name                                                                                                                                                                                                     | CAS No.      | Weight-% | Trade secret |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|--------------|
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5   | 0.001-5  | *            |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1     | 0.001-5  | *            |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6      | 0.001-5  | *            |
| Rice Hulls                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Lactic Acid                                                                                                                                                                                                       | NA           | 0.001-5  | *            |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2    | 0.001-5  | *            |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9     | 0.001-5  | *            |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2    | 0.001-5  | *            |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8   | 0.001-5  | *            |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA           | 0.001-5  | *            |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA           | 0.001-5  | *            |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8    | 0.001-5  | *            |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A          | 0.001-5  | *            |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6     | 0.001-5  | *            |
| Dried Whey                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5      | 0.001-5  | *            |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0      | 0.001-5  | *            |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0    | 0.001-5  | *            |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9      | 0.001-5  | *            |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2   | 0.001-5  | *            |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA           | 0.001-5  | *            |
| Trade Secret                                                                                                                                                                                                      | Trade secret | 0.001-5  | *            |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA           | 0.001-5  | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

|                                           |                                                                                                                                                                  |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.                                                  |
| <b>Inhalation</b>                         | If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.            |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.                                             |
| <b>Skin contact</b>                       | Wash skin with soap and water.                                                                                                                                   |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.                                               |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing |

dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** Avoid generation of dust. Fine dust dispersed in air may ignite.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Avoid generation of dust. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up** Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

## 8. Exposure controls/personal protection

### Working area parameters, subject to mandatory control (MAC or TSEL)

#### Exposure Limits

| Chemical name                    | ACGIH TLV                                                                                                                  | OSHA PEL                                                                                                                                                                                                    | NIOSH                                                                                         |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |
| Diatomaceous Earth<br>61790-53-2 | -                                                                                                                          | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA | -                                                                                             |
| Ferrous Sulfate<br>17375-41-6    | TWA: 1 mg/m <sup>3</sup> Fe                                                                                                | (vacated) TWA: 1 mg/m <sup>3</sup> Fe                                                                                                                                                                       | TWA: 1 mg/m <sup>3</sup> Fe                                                                   |
| Manganese Sulfate<br>10034-96-5  | TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter<br>TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter | (vacated) Ceiling: 5 mg/m <sup>3</sup><br>Ceiling: 5 mg/m <sup>3</sup> Mn                                                                                                                                   | IDLH: 500 mg/m <sup>3</sup> Mn<br>TWA: 1 mg/m <sup>3</sup> Mn<br>STEL: 3 mg/m <sup>3</sup> Mn |
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |

| Chemical name                     | ACGIH TLV                                                                                                          | OSHA PEL                                                                                                                                                                                                                                                                                                                  | NIOSH                                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Zinc Oxide<br>1314-13-2           | STEL: 10 mg/m <sup>3</sup> respirable particulate matter<br>TWA: 2 mg/m <sup>3</sup> respirable particulate matter | TWA: 5 mg/m <sup>3</sup> fume<br>TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 5 mg/m <sup>3</sup> fume<br>(vacated) TWA: 10 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) STEL: 10 mg/m <sup>3</sup> fume | IDLH: 500 mg/m <sup>3</sup><br>Ceiling: 15 mg/m <sup>3</sup> dust<br>TWA: 5 mg/m <sup>3</sup> dust and fume<br>STEL: 10 mg/m <sup>3</sup> fume |
| Cobalt Carbonate<br>51839-24-8    | TWA: 0.02 mg/m <sup>3</sup> Co inhalable particulate matter                                                        | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Copper Sulfate<br>7758-99-8       | TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                                          | -                                                                                                                                                                                                                                                                                                                         | IDLH: 100 mg/m <sup>3</sup> Cu dust and mist<br>TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                      |
| Potassium Iodide<br>7681-11-0     | TWA: 0.01 ppm inhalable fraction and vapor                                                                         | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Vitamin B12 Supplement<br>68-19-9 | -                                                                                                                  | TWA: 5 mg/m <sup>3</sup> CN<br>(vacated) TWA: 5 mg/m <sup>3</sup> S* as CN                                                                                                                                                                                                                                                | IDLH: 25 mg/m <sup>3</sup> CN                                                                                                                  |
| Diatomaceous Earth<br>61790-53-2  | -                                                                                                                  | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA                                                                                                               | -                                                                                                                                              |

**Biological occupational exposure limits**

| Chemical name                  | ACGIH                                                      |
|--------------------------------|------------------------------------------------------------|
| Cobalt Carbonate<br>51839-24-8 | 15 µg/L - urine (Cobalt) - end of shift at end of workweek |

**Appropriate engineering controls**

**Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing.

|                                       |                                                                                                                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.                       |
| <b>General hygiene considerations</b> | Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray. |

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                       |                           |
|-----------------------|---------------------------|
| <b>Physical state</b> | Solid                     |
| <b>Appearance</b>     | No information available. |
| <b>Color</b>          | No information available  |
| <b>Odor</b>           | Odorless                  |
| <b>Odor threshold</b> | No information available. |

| <u>Property</u>                        | <u>Values</u>     | <u>Remarks • Method</u> |
|----------------------------------------|-------------------|-------------------------|
| <b>pH</b>                              | No data available | None known              |
| <b>Melting point / freezing point</b>  | No data available | None known              |
| <b>Boiling point / boiling range</b>   | No data available | None known              |
| <b>Flash point</b>                     | No data available | None known              |
| <b>Evaporation rate</b>                | No data available | None known              |
| <b>Flammability</b>                    | No data available | None known              |
| <b>Flammability Limit in Air</b>       |                   | None known              |
| Upper flammability or explosive limits | No data available |                         |
| Lower flammability or explosive limits | No data available |                         |
| <b>Vapor pressure</b>                  | No data available | None known              |
| <b>Relative vapor density</b>          | No data available | None known              |
| <b>Relative density</b>                | No data available | None known              |
| <b>Water solubility</b>                | No data available | None known              |
| <b>Solubility(ies)</b>                 | No data available | None known              |
| <b>Partition coefficient</b>           | No data available | None known              |
| <b>Autoignition temperature</b>        | No data available | None known              |
| <b>Decomposition temperature</b>       |                   | None known              |
| <b>Kinematic viscosity</b>             | No data available | None known              |
| <b>Dynamic viscosity</b>               | No data available | None known              |

### Other information

|                             |                           |
|-----------------------------|---------------------------|
| <b>Explosive properties</b> | No information available  |
| <b>Oxidizing properties</b> | No information available  |
| <b>Softening point</b>      | No information available. |
| <b>Molecular weight</b>     | No information available. |
| <b>VOC content</b>          | No information available  |
| <b>Liquid Density</b>       | No information available. |
| <b>Bulk density</b>         | No information available. |

## 10. Stability and reactivity

|                   |                           |
|-------------------|---------------------------|
| <b>Reactivity</b> | No information available. |
|-------------------|---------------------------|

|                                           |                                                 |
|-------------------------------------------|-------------------------------------------------|
| <b>Chemical stability</b>                 | Stable under normal conditions.                 |
| <b>Possibility of hazardous reactions</b> | None under normal processing.                   |
| <b>Conditions to avoid</b>                | Excessive heat. Heating in air. Dust formation. |
| <b>Incompatible materials</b>             | None known based on information supplied.       |
| <b>Hazardous decomposition products</b>   | None known based on information supplied.       |

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

|                     |                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components). |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available.                                                                                          |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes mild skin irritation. May be harmful in contact with skin.                        |
| <b>Ingestion</b>    | May be harmful if swallowed.                                                                                                                               |

### Symptoms related to the physical, chemical and toxicological characteristics

|                 |                                                                                |
|-----------------|--------------------------------------------------------------------------------|
| <b>Symptoms</b> | Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. |
|-----------------|--------------------------------------------------------------------------------|

### Acute toxicity

#### Numerical measures of toxicity

#### The following ATE values have been calculated for the mixture

|                                      |                |
|--------------------------------------|----------------|
| <b>ATEmix (oral)</b>                 | 3,628.80 mg/kg |
| <b>ATEmix (dermal)</b>               | 2,530.10 mg/kg |
| <b>ATEmix (inhalation-gas)</b>       | 99,999.00 ppm  |
| <b>ATEmix (inhalation-dust/mist)</b> | 3.80 mg/l      |
| <b>ATEmix (inhalation-vapor)</b>     | 99,999.00 mg/l |

#### Unknown acute toxicity

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Component Information

| Chemical name                   | Oral LD50            | Dermal LD50          | Inhalation LC50      |
|---------------------------------|----------------------|----------------------|----------------------|
| Calcium Carbonate<br>471-34-1   | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | > 3 mg/L ( Rat ) 4 h |
| Potassium Chloride<br>7447-40-7 | = 2600 mg/kg ( Rat ) | -                    | -                    |

| Chemical name                     | Oral LD50            | Dermal LD50                               | Inhalation LC50                      |
|-----------------------------------|----------------------|-------------------------------------------|--------------------------------------|
| Choline Chloride<br>67-48-1       | = 3400 mg/kg ( Rat ) | -                                         | -                                    |
| Mineral Oil<br>8042-47-5          | > 5000 mg/kg ( Rat ) | -                                         | -                                    |
| Ferrous Sulfate<br>17375-41-6     | = 319 mg/kg ( Rat )  | -                                         | -                                    |
| Manganese Sulfate<br>10034-96-5   | = 782 mg/kg ( Rat )  | -                                         | > 4.45 mg/L ( Rat ) 4 h              |
| Calcium Carbonate<br>471-34-1     | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 3 mg/L ( Rat ) 4 h                 |
| Niacin Supplement<br>59-67-6      | = 7 g/kg ( Rat )     | > 2000 mg/kg ( Rat )                      | > 3.8 mg/L ( Rat ) 4 h               |
| Vitamin E Supplement<br>7695-91-2 | -                    | > 3000 mg/kg ( Rat )                      | -                                    |
| Vitamin A Supplement<br>127-47-9  | = 4980 mg/kg ( Rat ) | -                                         | -                                    |
| Zinc Oxide<br>1314-13-2           | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 5700 mg/m <sup>3</sup> ( Rat ) 4 h |
| Copper Sulfate<br>7758-99-8       | = 960 mg/kg ( Rat )  | > 8 g/kg ( Rabbit )                       | -                                    |
| Calcium Pantothenate<br>137-08-6  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Riboflavin Supplement<br>83-88-5  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Vitamin D3 Supplement<br>67-97-0  | = 42 mg/kg ( Rat )   | = 61 mg/kg ( Rat )<br>= 185 mg/kg ( Rat ) | 0.13 - 0.38 mg/L ( Rat ) 4 h         |
| Potassium Iodide<br>7681-11-0     | -                    | > 2000 mg/kg ( Rat )                      | -                                    |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. May cause skin irritation.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name                         | ACGIH | IARC    | NTP | OSHA |
|---------------------------------------|-------|---------|-----|------|
| Diatomaceous Earth<br>61790-53-2      | -     | Group 3 | -   | X    |
| Menadione Sodium<br>Bisulfite Complex | -     | Group 3 | -   | -    |

| Chemical name                     | ACGIH | IARC     | NTP                    | OSHA |
|-----------------------------------|-------|----------|------------------------|------|
| 130-37-0                          |       |          |                        |      |
| Cobalt Carbonate<br>51839-24-8    | A3    | Group 2B | Reasonably Anticipated | X    |
| Vitamin B12 Supplement<br>68-19-9 | -     | Group 2B | Reasonably Anticipated | X    |
| Diatomaceous Earth<br>61790-53-2  | -     | Group 3  | -                      | X    |

**Legend**
**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

**NTP (National Toxicology Program)**

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**Occupational Safety and Health Administration of the US Department of Labor**

X - Present

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target organ effects** Liver, Respiratory system, Eyes, Skin, Gastrointestinal tract (GI).

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

**12. Ecological information**
**Ecotoxicity** Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

| Chemical name                   | Algae/aquatic plants                              | Fish                                                                        | Toxicity to microorganisms | Crustacea                                                                       |
|---------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------|
| Potassium Chloride<br>7447-40-7 | EC50: =2500mg/L (72h,<br>Desmodesmus subspicatus) | LC50: 750 - 1020mg/L<br>(96h, Pimephales promelas)<br>LC50: =1060mg/L (96h, | -                          | EC50: =825mg/L (48h,<br>Daphnia magna)<br>EC50: =83mg/L (48h,<br>Daphnia magna) |

| Chemical name                     | Algae/aquatic plants                               | Fish                                                                                                                                                                                                                                                                                                                             | Toxicity to microorganisms | Crustacea                                                                                               |
|-----------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------|
|                                   |                                                    | Lepomis macrochirus)                                                                                                                                                                                                                                                                                                             |                            |                                                                                                         |
| Choline Chloride<br>67-48-1       | EC50: >500mg/L (72h,<br>Desmodesmus subspicatus)   | -                                                                                                                                                                                                                                                                                                                                | -                          | EC50: >320mg/L (48h,<br>Daphnia magna)<br>EC50: >500mg/L (48h,<br>Daphnia magna Straus)                 |
| Mineral Oil<br>8042-47-5          | -                                                  | LC50: >10000mg/L (96h,<br>Lepomis macrochirus)                                                                                                                                                                                                                                                                                   | -                          | -                                                                                                       |
| Ferrous Sulfate<br>17375-41-6     | -                                                  | LC50: =0.56mg/L (96h,<br>Cyprinus carpio)<br>LC50: =925mg/L (96h,<br>Poecilia reticulata)                                                                                                                                                                                                                                        | -                          | EC50: 6.15 - 9.26mg/L<br>(48h, Daphnia magna)<br>EC50: =152mg/L (48h,<br>Daphnia magna)                 |
| Niacin Supplement<br>59-67-6      | EC50: =89.93mg/L (72h,<br>Desmodesmus subspicatus) | LC50: =520mg/L (96h,<br>Salmo trutta)                                                                                                                                                                                                                                                                                            | -                          | EC50: =77mg/L (48h,<br>Daphnia magna)                                                                   |
| Vitamin E Supplement<br>7695-91-2 | -                                                  | LC50: >100mg/L (96h,<br>Oncorhynchus mykiss)                                                                                                                                                                                                                                                                                     | -                          | -                                                                                                       |
| Vitamin A Supplement<br>127-47-9  | -                                                  | LC50: =1.37mg/L (96h,<br>Oncorhynchus mykiss)                                                                                                                                                                                                                                                                                    | -                          | -                                                                                                       |
| Zinc Oxide<br>1314-13-2           | -                                                  | LC50: =1.55mg/L (96h,<br>Danio rerio)                                                                                                                                                                                                                                                                                            | -                          | -                                                                                                       |
| Copper Sulfate<br>7758-99-8       | -                                                  | LC50: 0.09 - 0.19mg/L<br>(96h, Oncorhynchus mykiss)<br>LC50: 0.1478 -<br>0.165mg/L (96h,<br>Oncorhynchus mykiss)<br>LC50: 0.66 - 1.15mg/L<br>(96h, Lepomis macrochirus)<br>LC50: 0.96 - 1.8mg/L<br>(96h, Lepomis macrochirus)<br>LC50: =0.1mg/L (96h,<br>Oncorhynchus mykiss)<br>LC50: =0.6752mg/L (96h,<br>Pimephales promelas) | -                          | EC50: 0.0058 -<br>0.0073mg/L (48h,<br>Daphnia magna)<br>EC50: 0.147 - 0.227mg/L<br>(48h, Daphnia magna) |
| Potassium Iodide<br>7681-11-0     | -                                                  | LC50: >100mg/L (96h,<br>Danio rerio)                                                                                                                                                                                                                                                                                             | -                          | -                                                                                                       |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

| Chemical name               | Partition coefficient |
|-----------------------------|-----------------------|
| Choline Chloride<br>67-48-1 | -3.77                 |
| Mineral Oil<br>8042-47-5    | >6                    |
| Niacin Supplement           | -0.59                 |

| Chemical name                     | Partition coefficient |
|-----------------------------------|-----------------------|
| 59-67-6                           |                       |
| Vitamin A Supplement<br>127-47-9  | 9.4                   |
| Vitamin B12 Supplement<br>68-19-9 | 3.57                  |

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

### 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated  
Technical Name

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

### 15. Regulatory information

#### International Inventories

**TSCA** Contact supplier for inventory compliance status.

| Chemical name                                                                                                                                                                                                     | CAS No.    | Inventory Listing Status | Commercial Activity Designation |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------|
| Potassium Sulfate, Magnesium Sulfate                                                                                                                                                                              | 14977-37-8 | -                        | Unknown                         |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Magnesium-Mica                                                                                                                                                                                                    | NA         | -                        | Unknown                         |
| Potassium Chloride                                                                                                                                                                                                | 7447-40-7  | Present                  | Active                          |
| Choline Chloride                                                                                                                                                                                                  | 67-48-1    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Menadione Sodium Bisulfite Complex                                                                                                                                                                                | 130-37-0   | Present                  | Active                          |
| Mineral Oil                                                                                                                                                                                                       | 8042-47-5  | Present                  | Active                          |
| Ferrous Sulfate                                                                                                                                                                                                   | 17375-41-6 | Present                  | Active                          |
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5 | Present                  | Active                          |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6    | Present                  | Active                          |
| Rice Hulls                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Lactic Acid                                                                                                                                                                                                       | NA         | -                        | Unknown                         |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2  | Present                  | Active                          |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9   | Present                  | Active                          |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2  | Present                  | Active                          |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8 | Present                  | Active                          |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA         | -                        | Unknown                         |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA         | -                        | Unknown                         |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8  | Present                  | Active                          |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A        | -                        | Unknown                         |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6   | Present                  | Active                          |
| Dried Whey                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5    | Present                  | Active                          |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0    | Present                  | Active                          |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0  | Present                  | Active                          |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Trade Secret                                                                                                                                                                                                      | -          | Present                  | Active                          |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA         | -                        | Unknown                         |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA         | -                        | Unknown                         |

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

**DSL/NDL**  
**EINECS/ELINCS**  
**ENCS**  
**IECSC**  
**KECL**  
**PICCS**  
**AIIC**

Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

**US Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name                    | SARA 313 - Threshold Values % |
|----------------------------------|-------------------------------|
| Manganese Sulfate - 10034-96-5   | 1.0                           |
| Zinc Oxide - 1314-13-2           | 1.0                           |
| Cobalt Carbonate - 51839-24-8    | 0.1                           |
| Copper Sulfate - 7758-99-8       | 1.0                           |
| Vitamin B12 Supplement - 68-19-9 | 1.0                           |
|                                  | 0.1                           |

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name                     | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-----------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Ferrous Sulfate<br>17375-41-6     | 1000 lb                     | -                      | -                         | X                          |
| Zinc Oxide<br>1314-13-2           | -                           | X                      | -                         | -                          |
| Copper Sulfate<br>7758-99-8       | 10 lb                       | X                      | -                         | X                          |
| Vitamin B12 Supplement<br>68-19-9 | -                           | X                      | X                         | -                          |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ) |
|---------------|--------------------------|------------------------------------|--------------------------|
|---------------|--------------------------|------------------------------------|--------------------------|

| Chemical name                 | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ)                  |
|-------------------------------|--------------------------|------------------------------------|-------------------------------------------|
| Ferrous Sulfate<br>17375-41-6 | 1000 lb                  | -                                  | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Copper Sulfate<br>7758-99-8   | 10 lb                    | -                                  | RQ 10 lb final RQ<br>RQ 4.54 kg final RQ  |

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

| Chemical name                     | New Jersey | Massachusetts | Pennsylvania |
|-----------------------------------|------------|---------------|--------------|
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Diatomaceous Earth<br>61790-53-2  | X          | -             | -            |
| Ferrous Sulfate<br>17375-41-6     | X          | X             | X            |
| Manganese Sulfate<br>10034-96-5   | X          | -             | X            |
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Zinc Oxide<br>1314-13-2           | X          | X             | X            |
| Cobalt Carbonate<br>51839-24-8    | X          | -             | X            |
| Copper Sulfate<br>7758-99-8       | X          | X             | X            |
| Vitamin B12 Supplement<br>68-19-9 | X          | -             | X            |

### U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

## **16. Other information**

|                                   |                          |                           |                           |                              |
|-----------------------------------|--------------------------|---------------------------|---------------------------|------------------------------|
| <b>NFPA</b>                       | <b>Health hazards</b> 2  | <b>Flammability</b> 1     | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b>                       | <b>Health hazards</b> 1* | <b>Flammability</b> 0     | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |
| <i>Chronic Hazard Star Legend</i> |                          | * = Chronic Health Hazard |                           |                              |

### Key or legend to abbreviations and acronyms used in the safety data sheet

**Legend Section 8: Exposure controls/personal protection**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling                      Maximum limit value                      \*                      Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date**                      28-Jul-2026

**Revision Note**                      No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of Ralco's knowledge, information and belief at the date of preparation. The information provided is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The conditions or methods of said handling, storage, use, and disposal of this product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expenses arising out of or connected with the handling, storage, use, or disposal of this product. The information provided relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



**1. Identification****Product identifier****Product Name** Durvet DuraFight For Cow Stress**Other means of identification****Product Code(s)** 2604**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended use** Livestock Feed Supplement.**Restrictions on use** Protect against direct sunlight, Keep out of reach of children**Details of the supplier of the safety data sheet**

| <b>Supplier</b>                                               | <b>Manufacturer Address</b>                                   |
|---------------------------------------------------------------|---------------------------------------------------------------|
| Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 | Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 |

**Emergency telephone number****Emergency Telephone** +1 800 533 5306**2. Hazard(s) identification****Classification**

|                                           |             |
|-------------------------------------------|-------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4  |
| Carcinogenicity                           | Category 1B |
| Combustible dust                          | Yes         |

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements****Danger****Hazard statements**Harmful if inhaled  
May cause cancer  
May form combustible dust concentrations in air


**Appearance** No information available.

**Physical state** Solid

**Odor** Odorless

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves, protective clothing, eye protection and face protection

Avoid breathing dust, fume, gas, mist, vapors and spray

Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

**Unknown acute toxicity**

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Other information**

May be harmful if swallowed. May be harmful in contact with skin. Causes mild skin irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name                        | CAS No.    | Weight-% | Trade secret |
|--------------------------------------|------------|----------|--------------|
| Potassium Sulfate, Magnesium Sulfate | 14977-37-8 | 10-50    | *            |
| Calcium Carbonate                    | 471-34-1   | 10-50    | *            |
| Magnesium-Mica                       | NA         | 10-50    | *            |
| Potassium Chloride                   | 7447-40-7  | 0.5-25   | *            |
| Choline Chloride                     | 67-48-1    | 0.5-25   | *            |
| Diatomaceous Earth                   | 61790-53-2 | 0.5-25   | *            |
| Menadione Sodium Bisulfite Complex   | 130-37-0   | 0.5-25   | *            |
| Mineral Oil                          | 8042-47-5  | 0.5-25   | *            |
| Ferrous Sulfate                      | 17375-41-6 | 0.5-25   | *            |

| Chemical name                                                                                                                                                                                                     | CAS No.      | Weight-% | Trade secret |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|--------------|
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5   | 0.001-5  | *            |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1     | 0.001-5  | *            |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6      | 0.001-5  | *            |
| Rice Hulls                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Lactic Acid                                                                                                                                                                                                       | NA           | 0.001-5  | *            |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2    | 0.001-5  | *            |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9     | 0.001-5  | *            |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2    | 0.001-5  | *            |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8   | 0.001-5  | *            |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA           | 0.001-5  | *            |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA           | 0.001-5  | *            |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8    | 0.001-5  | *            |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A          | 0.001-5  | *            |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6     | 0.001-5  | *            |
| Dried Whey                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5      | 0.001-5  | *            |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0      | 0.001-5  | *            |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0    | 0.001-5  | *            |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9      | 0.001-5  | *            |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2   | 0.001-5  | *            |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA           | 0.001-5  | *            |
| Trade Secret                                                                                                                                                                                                      | Trade secret | 0.001-5  | *            |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA           | 0.001-5  | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

|                                           |                                                                                                                                                                  |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.                                                  |
| <b>Inhalation</b>                         | If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.            |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.                                             |
| <b>Skin contact</b>                       | Wash skin with soap and water.                                                                                                                                   |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.                                               |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing |

dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** Avoid generation of dust. Fine dust dispersed in air may ignite.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Avoid generation of dust. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up** Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

## 8. Exposure controls/personal protection

### Working area parameters, subject to mandatory control (MAC or TSEL)

#### Exposure Limits

| Chemical name                    | ACGIH TLV                                                                                                                  | OSHA PEL                                                                                                                                                                                                    | NIOSH                                                                                         |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |
| Diatomaceous Earth<br>61790-53-2 | -                                                                                                                          | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA | -                                                                                             |
| Ferrous Sulfate<br>17375-41-6    | TWA: 1 mg/m <sup>3</sup> Fe                                                                                                | (vacated) TWA: 1 mg/m <sup>3</sup> Fe                                                                                                                                                                       | TWA: 1 mg/m <sup>3</sup> Fe                                                                   |
| Manganese Sulfate<br>10034-96-5  | TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter<br>TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter | (vacated) Ceiling: 5 mg/m <sup>3</sup><br>Ceiling: 5 mg/m <sup>3</sup> Mn                                                                                                                                   | IDLH: 500 mg/m <sup>3</sup> Mn<br>TWA: 1 mg/m <sup>3</sup> Mn<br>STEL: 3 mg/m <sup>3</sup> Mn |
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |

| Chemical name                     | ACGIH TLV                                                                                                          | OSHA PEL                                                                                                                                                                                                                                                                                                                  | NIOSH                                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Zinc Oxide<br>1314-13-2           | STEL: 10 mg/m <sup>3</sup> respirable particulate matter<br>TWA: 2 mg/m <sup>3</sup> respirable particulate matter | TWA: 5 mg/m <sup>3</sup> fume<br>TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 5 mg/m <sup>3</sup> fume<br>(vacated) TWA: 10 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) STEL: 10 mg/m <sup>3</sup> fume | IDLH: 500 mg/m <sup>3</sup><br>Ceiling: 15 mg/m <sup>3</sup> dust<br>TWA: 5 mg/m <sup>3</sup> dust and fume<br>STEL: 10 mg/m <sup>3</sup> fume |
| Cobalt Carbonate<br>51839-24-8    | TWA: 0.02 mg/m <sup>3</sup> Co inhalable particulate matter                                                        | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Copper Sulfate<br>7758-99-8       | TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                                          | -                                                                                                                                                                                                                                                                                                                         | IDLH: 100 mg/m <sup>3</sup> Cu dust and mist<br>TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                      |
| Potassium Iodide<br>7681-11-0     | TWA: 0.01 ppm inhalable fraction and vapor                                                                         | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Vitamin B12 Supplement<br>68-19-9 | -                                                                                                                  | TWA: 5 mg/m <sup>3</sup> CN<br>(vacated) TWA: 5 mg/m <sup>3</sup> S* as CN                                                                                                                                                                                                                                                | IDLH: 25 mg/m <sup>3</sup> CN                                                                                                                  |
| Diatomaceous Earth<br>61790-53-2  | -                                                                                                                  | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA                                                                                                               | -                                                                                                                                              |

**Biological occupational exposure limits**

| Chemical name                  | ACGIH                                                      |
|--------------------------------|------------------------------------------------------------|
| Cobalt Carbonate<br>51839-24-8 | 15 µg/L - urine (Cobalt) - end of shift at end of workweek |

**Appropriate engineering controls**

**Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing.

|                                       |                                                                                                                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.                       |
| <b>General hygiene considerations</b> | Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray. |

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                       |                           |
|-----------------------|---------------------------|
| <b>Physical state</b> | Solid                     |
| <b>Appearance</b>     | No information available. |
| <b>Color</b>          | No information available  |
| <b>Odor</b>           | Odorless                  |
| <b>Odor threshold</b> | No information available. |

| <u>Property</u>                        | <u>Values</u>     | <u>Remarks • Method</u> |
|----------------------------------------|-------------------|-------------------------|
| pH                                     | No data available | None known              |
| Melting point / freezing point         | No data available | None known              |
| Boiling point / boiling range          | No data available | None known              |
| Flash point                            | No data available | None known              |
| Evaporation rate                       | No data available | None known              |
| Flammability                           | No data available | None known              |
| Flammability Limit in Air              |                   | None known              |
| Upper flammability or explosive limits | No data available |                         |
| Lower flammability or explosive limits | No data available |                         |
| Vapor pressure                         | No data available | None known              |
| Relative vapor density                 | No data available | None known              |
| Relative density                       | No data available | None known              |
| Water solubility                       | No data available | None known              |
| Solubility(ies)                        | No data available | None known              |
| Partition coefficient                  | No data available | None known              |
| Autoignition temperature               | No data available | None known              |
| Decomposition temperature              |                   | None known              |
| Kinematic viscosity                    | No data available | None known              |
| Dynamic viscosity                      | No data available | None known              |

### Other information

|                             |                           |
|-----------------------------|---------------------------|
| <b>Explosive properties</b> | No information available  |
| <b>Oxidizing properties</b> | No information available  |
| <b>Softening point</b>      | No information available. |
| <b>Molecular weight</b>     | No information available. |
| <b>VOC content</b>          | No information available  |
| <b>Liquid Density</b>       | No information available. |
| <b>Bulk density</b>         | No information available. |

## 10. Stability and reactivity

|                   |                           |
|-------------------|---------------------------|
| <b>Reactivity</b> | No information available. |
|-------------------|---------------------------|

|                                           |                                                 |
|-------------------------------------------|-------------------------------------------------|
| <b>Chemical stability</b>                 | Stable under normal conditions.                 |
| <b>Possibility of hazardous reactions</b> | None under normal processing.                   |
| <b>Conditions to avoid</b>                | Excessive heat. Heating in air. Dust formation. |
| <b>Incompatible materials</b>             | None known based on information supplied.       |
| <b>Hazardous decomposition products</b>   | None known based on information supplied.       |

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

|                     |                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components). |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available.                                                                                          |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes mild skin irritation. May be harmful in contact with skin.                        |
| <b>Ingestion</b>    | May be harmful if swallowed.                                                                                                                               |

### Symptoms related to the physical, chemical and toxicological characteristics

|                 |                                                                                |
|-----------------|--------------------------------------------------------------------------------|
| <b>Symptoms</b> | Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. |
|-----------------|--------------------------------------------------------------------------------|

### Acute toxicity

#### Numerical measures of toxicity

#### The following ATE values have been calculated for the mixture

|                                      |                |
|--------------------------------------|----------------|
| <b>ATEmix (oral)</b>                 | 3,628.80 mg/kg |
| <b>ATEmix (dermal)</b>               | 2,530.10 mg/kg |
| <b>ATEmix (inhalation-gas)</b>       | 99,999.00 ppm  |
| <b>ATEmix (inhalation-dust/mist)</b> | 3.80 mg/l      |
| <b>ATEmix (inhalation-vapor)</b>     | 99,999.00 mg/l |

#### Unknown acute toxicity

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Component Information

| Chemical name                   | Oral LD50            | Dermal LD50          | Inhalation LC50      |
|---------------------------------|----------------------|----------------------|----------------------|
| Calcium Carbonate<br>471-34-1   | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | > 3 mg/L ( Rat ) 4 h |
| Potassium Chloride<br>7447-40-7 | = 2600 mg/kg ( Rat ) | -                    | -                    |

| Chemical name                     | Oral LD50            | Dermal LD50                               | Inhalation LC50                      |
|-----------------------------------|----------------------|-------------------------------------------|--------------------------------------|
| Choline Chloride<br>67-48-1       | = 3400 mg/kg ( Rat ) | -                                         | -                                    |
| Mineral Oil<br>8042-47-5          | > 5000 mg/kg ( Rat ) | -                                         | -                                    |
| Ferrous Sulfate<br>17375-41-6     | = 319 mg/kg ( Rat )  | -                                         | -                                    |
| Manganese Sulfate<br>10034-96-5   | = 782 mg/kg ( Rat )  | -                                         | > 4.45 mg/L ( Rat ) 4 h              |
| Calcium Carbonate<br>471-34-1     | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 3 mg/L ( Rat ) 4 h                 |
| Niacin Supplement<br>59-67-6      | = 7 g/kg ( Rat )     | > 2000 mg/kg ( Rat )                      | > 3.8 mg/L ( Rat ) 4 h               |
| Vitamin E Supplement<br>7695-91-2 | -                    | > 3000 mg/kg ( Rat )                      | -                                    |
| Vitamin A Supplement<br>127-47-9  | = 4980 mg/kg ( Rat ) | -                                         | -                                    |
| Zinc Oxide<br>1314-13-2           | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 5700 mg/m <sup>3</sup> ( Rat ) 4 h |
| Copper Sulfate<br>7758-99-8       | = 960 mg/kg ( Rat )  | > 8 g/kg ( Rabbit )                       | -                                    |
| Calcium Pantothenate<br>137-08-6  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Riboflavin Supplement<br>83-88-5  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Vitamin D3 Supplement<br>67-97-0  | = 42 mg/kg ( Rat )   | = 61 mg/kg ( Rat )<br>= 185 mg/kg ( Rat ) | 0.13 - 0.38 mg/L ( Rat ) 4 h         |
| Potassium Iodide<br>7681-11-0     | -                    | > 2000 mg/kg ( Rat )                      | -                                    |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. May cause skin irritation.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name                         | ACGIH | IARC    | NTP | OSHA |
|---------------------------------------|-------|---------|-----|------|
| Diatomaceous Earth<br>61790-53-2      | -     | Group 3 | -   | X    |
| Menadione Sodium<br>Bisulfite Complex | -     | Group 3 | -   | -    |

| Chemical name                     | ACGIH | IARC     | NTP                    | OSHA |
|-----------------------------------|-------|----------|------------------------|------|
| 130-37-0                          |       |          |                        |      |
| Cobalt Carbonate<br>51839-24-8    | A3    | Group 2B | Reasonably Anticipated | X    |
| Vitamin B12 Supplement<br>68-19-9 | -     | Group 2B | Reasonably Anticipated | X    |
| Diatomaceous Earth<br>61790-53-2  | -     | Group 3  | -                      | X    |

**Legend**
**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

**NTP (National Toxicology Program)**

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**Occupational Safety and Health Administration of the US Department of Labor**

X - Present

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target organ effects** Liver, Respiratory system, Eyes, Skin, Gastrointestinal tract (GI).

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

**12. Ecological information**
**Ecotoxicity** Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

| Chemical name                   | Algae/aquatic plants                              | Fish                                                                        | Toxicity to microorganisms | Crustacea                                                                       |
|---------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------|
| Potassium Chloride<br>7447-40-7 | EC50: =2500mg/L (72h,<br>Desmodesmus subspicatus) | LC50: 750 - 1020mg/L<br>(96h, Pimephales promelas)<br>LC50: =1060mg/L (96h, | -                          | EC50: =825mg/L (48h,<br>Daphnia magna)<br>EC50: =83mg/L (48h,<br>Daphnia magna) |

| Chemical name                     | Algae/aquatic plants                           | Fish                                                                                                                                                                                                                                                                                                        | Toxicity to microorganisms | Crustacea                                                                                      |
|-----------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------|
|                                   |                                                | Lepomis macrochirus)                                                                                                                                                                                                                                                                                        |                            |                                                                                                |
| Choline Chloride<br>67-48-1       | EC50: >500mg/L (72h, Desmodemus subspicatus)   | -                                                                                                                                                                                                                                                                                                           | -                          | EC50: >320mg/L (48h, Daphnia magna)<br>EC50: >500mg/L (48h, Daphnia magna Straus)              |
| Mineral Oil<br>8042-47-5          | -                                              | LC50: >10000mg/L (96h, Lepomis macrochirus)                                                                                                                                                                                                                                                                 | -                          | -                                                                                              |
| Ferrous Sulfate<br>17375-41-6     | -                                              | LC50: =0.56mg/L (96h, Cyprinus carpio)<br>LC50: =925mg/L (96h, Poecilia reticulata)                                                                                                                                                                                                                         | -                          | EC50: 6.15 - 9.26mg/L (48h, Daphnia magna)<br>EC50: =152mg/L (48h, Daphnia magna)              |
| Niacin Supplement<br>59-67-6      | EC50: =89.93mg/L (72h, Desmodemus subspicatus) | LC50: =520mg/L (96h, Salmo trutta)                                                                                                                                                                                                                                                                          | -                          | EC50: =77mg/L (48h, Daphnia magna)                                                             |
| Vitamin E Supplement<br>7695-91-2 | -                                              | LC50: >100mg/L (96h, Oncorhynchus mykiss)                                                                                                                                                                                                                                                                   | -                          | -                                                                                              |
| Vitamin A Supplement<br>127-47-9  | -                                              | LC50: =1.37mg/L (96h, Oncorhynchus mykiss)                                                                                                                                                                                                                                                                  | -                          | -                                                                                              |
| Zinc Oxide<br>1314-13-2           | -                                              | LC50: =1.55mg/L (96h, Danio rerio)                                                                                                                                                                                                                                                                          | -                          | -                                                                                              |
| Copper Sulfate<br>7758-99-8       | -                                              | LC50: 0.09 - 0.19mg/L (96h, Oncorhynchus mykiss)<br>LC50: 0.1478 - 0.165mg/L (96h, Oncorhynchus mykiss)<br>LC50: 0.66 - 1.15mg/L (96h, Lepomis macrochirus)<br>LC50: 0.96 - 1.8mg/L (96h, Lepomis macrochirus)<br>LC50: =0.1mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.6752mg/L (96h, Pimephales promelas) | -                          | EC50: 0.0058 - 0.0073mg/L (48h, Daphnia magna)<br>EC50: 0.147 - 0.227mg/L (48h, Daphnia magna) |
| Potassium Iodide<br>7681-11-0     | -                                              | LC50: >100mg/L (96h, Danio rerio)                                                                                                                                                                                                                                                                           | -                          | -                                                                                              |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

| Chemical name               | Partition coefficient |
|-----------------------------|-----------------------|
| Choline Chloride<br>67-48-1 | -3.77                 |
| Mineral Oil<br>8042-47-5    | >6                    |
| Niacin Supplement           | -0.59                 |

| Chemical name                     | Partition coefficient |
|-----------------------------------|-----------------------|
| 59-67-6                           |                       |
| Vitamin A Supplement<br>127-47-9  | 9.4                   |
| Vitamin B12 Supplement<br>68-19-9 | 3.57                  |

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

### 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated  
Technical Name

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

### 15. Regulatory information

#### International Inventories

**TSCA** Contact supplier for inventory compliance status.

| Chemical name                                                                                                                                                                                                     | CAS No.    | Inventory Listing Status | Commercial Activity Designation |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------|
| Potassium Sulfate, Magnesium Sulfate                                                                                                                                                                              | 14977-37-8 | -                        | Unknown                         |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Magnesium-Mica                                                                                                                                                                                                    | NA         | -                        | Unknown                         |
| Potassium Chloride                                                                                                                                                                                                | 7447-40-7  | Present                  | Active                          |
| Choline Chloride                                                                                                                                                                                                  | 67-48-1    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Menadione Sodium Bisulfite Complex                                                                                                                                                                                | 130-37-0   | Present                  | Active                          |
| Mineral Oil                                                                                                                                                                                                       | 8042-47-5  | Present                  | Active                          |
| Ferrous Sulfate                                                                                                                                                                                                   | 17375-41-6 | Present                  | Active                          |
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5 | Present                  | Active                          |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6    | Present                  | Active                          |
| Rice Hulls                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Lactic Acid                                                                                                                                                                                                       | NA         | -                        | Unknown                         |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2  | Present                  | Active                          |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9   | Present                  | Active                          |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2  | Present                  | Active                          |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8 | Present                  | Active                          |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA         | -                        | Unknown                         |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA         | -                        | Unknown                         |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8  | Present                  | Active                          |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A        | -                        | Unknown                         |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6   | Present                  | Active                          |
| Dried Whey                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5    | Present                  | Active                          |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0    | Present                  | Active                          |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0  | Present                  | Active                          |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Trade Secret                                                                                                                                                                                                      | -          | Present                  | Active                          |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA         | -                        | Unknown                         |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA         | -                        | Unknown                         |

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

**DSL/NDL**  
**EINECS/ELINCS**  
**ENCS**  
**IECSC**  
**KECL**  
**PICCS**  
**AIIC**

Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

**US Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name                    | SARA 313 - Threshold Values % |
|----------------------------------|-------------------------------|
| Manganese Sulfate - 10034-96-5   | 1.0                           |
| Zinc Oxide - 1314-13-2           | 1.0                           |
| Cobalt Carbonate - 51839-24-8    | 0.1                           |
| Copper Sulfate - 7758-99-8       | 1.0                           |
| Vitamin B12 Supplement - 68-19-9 | 1.0                           |
|                                  | 0.1                           |

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name                     | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-----------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Ferrous Sulfate<br>17375-41-6     | 1000 lb                     | -                      | -                         | X                          |
| Zinc Oxide<br>1314-13-2           | -                           | X                      | -                         | -                          |
| Copper Sulfate<br>7758-99-8       | 10 lb                       | X                      | -                         | X                          |
| Vitamin B12 Supplement<br>68-19-9 | -                           | X                      | X                         | -                          |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ) |
|---------------|--------------------------|------------------------------------|--------------------------|
|---------------|--------------------------|------------------------------------|--------------------------|

| Chemical name                 | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ)                  |
|-------------------------------|--------------------------|------------------------------------|-------------------------------------------|
| Ferrous Sulfate<br>17375-41-6 | 1000 lb                  | -                                  | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Copper Sulfate<br>7758-99-8   | 10 lb                    | -                                  | RQ 10 lb final RQ<br>RQ 4.54 kg final RQ  |

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

| Chemical name                     | New Jersey | Massachusetts | Pennsylvania |
|-----------------------------------|------------|---------------|--------------|
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Diatomaceous Earth<br>61790-53-2  | X          | -             | -            |
| Ferrous Sulfate<br>17375-41-6     | X          | X             | X            |
| Manganese Sulfate<br>10034-96-5   | X          | -             | X            |
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Zinc Oxide<br>1314-13-2           | X          | X             | X            |
| Cobalt Carbonate<br>51839-24-8    | X          | -             | X            |
| Copper Sulfate<br>7758-99-8       | X          | X             | X            |
| Vitamin B12 Supplement<br>68-19-9 | X          | -             | X            |

### U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

## **16. Other information**

|                                   |                          |                           |                           |                              |
|-----------------------------------|--------------------------|---------------------------|---------------------------|------------------------------|
| <b>NFPA</b>                       | <b>Health hazards</b> 2  | <b>Flammability</b> 1     | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b>                       | <b>Health hazards</b> 1* | <b>Flammability</b> 0     | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |
| <i>Chronic Hazard Star Legend</i> |                          | * = Chronic Health Hazard |                           |                              |

### Key or legend to abbreviations and acronyms used in the safety data sheet

**Legend Section 8: Exposure controls/personal protection**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling                      Maximum limit value                      \*                      Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date**                      28-Jul-2026

**Revision Note**                      No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of Ralco's knowledge, information and belief at the date of preparation. The information provided is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The conditions or methods of said handling, storage, use, and disposal of this product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expenses arising out of or connected with the handling, storage, use, or disposal of this product. The information provided relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**



**1. Identification****Product identifier**

**Product Name** Durvet DuraFight For Cow Stress

**Other means of identification**

**Product Code(s)** 2604

**Synonyms** None

**Recommended use of the chemical and restrictions on use**

**Recommended use** Livestock Feed Supplement.

**Restrictions on use** Protect against direct sunlight, Keep out of reach of children

**Details of the supplier of the safety data sheet**

| <b>Supplier</b>                                               | <b>Manufacturer Address</b>                                   |
|---------------------------------------------------------------|---------------------------------------------------------------|
| Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 | Ralco Nutrition, Inc.<br>1600 Hahn Road<br>Marshall, MN 56258 |

**Emergency telephone number**

**Emergency Telephone** +1 800 533 5306

**2. Hazard(s) identification****Classification**

|                                           |             |
|-------------------------------------------|-------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 4  |
| Carcinogenicity                           | Category 1B |
| Combustible dust                          | Yes         |

**Hazards not otherwise classified (HNOC)**

Not applicable

**Label elements**

**Danger**

**Hazard statements**

Harmful if inhaled  
May cause cancer  
May form combustible dust concentrations in air


**Appearance** No information available.

**Physical state** Solid

**Odor** Odorless

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves, protective clothing, eye protection and face protection

Avoid breathing dust, fume, gas, mist, vapors and spray

Use only outdoors or in a well-ventilated area

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable

**Unknown acute toxicity**

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

**Other information**

May be harmful if swallowed. May be harmful in contact with skin. Causes mild skin irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name                        | CAS No.    | Weight-% | Trade secret |
|--------------------------------------|------------|----------|--------------|
| Potassium Sulfate, Magnesium Sulfate | 14977-37-8 | 10-50    | *            |
| Calcium Carbonate                    | 471-34-1   | 10-50    | *            |
| Magnesium-Mica                       | NA         | 10-50    | *            |
| Potassium Chloride                   | 7447-40-7  | 0.5-25   | *            |
| Choline Chloride                     | 67-48-1    | 0.5-25   | *            |
| Diatomaceous Earth                   | 61790-53-2 | 0.5-25   | *            |
| Menadione Sodium Bisulfite Complex   | 130-37-0   | 0.5-25   | *            |
| Mineral Oil                          | 8042-47-5  | 0.5-25   | *            |
| Ferrous Sulfate                      | 17375-41-6 | 0.5-25   | *            |

| Chemical name                                                                                                                                                                                                     | CAS No.      | Weight-% | Trade secret |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|--------------|
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5   | 0.001-5  | *            |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1     | 0.001-5  | *            |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6      | 0.001-5  | *            |
| Rice Hulls                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Lactic Acid                                                                                                                                                                                                       | NA           | 0.001-5  | *            |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2    | 0.001-5  | *            |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9     | 0.001-5  | *            |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2    | 0.001-5  | *            |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8   | 0.001-5  | *            |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA           | 0.001-5  | *            |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA           | 0.001-5  | *            |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8    | 0.001-5  | *            |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A          | 0.001-5  | *            |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6     | 0.001-5  | *            |
| Dried Whey                                                                                                                                                                                                        | NA           | 0.001-5  | *            |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5      | 0.001-5  | *            |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0      | 0.001-5  | *            |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0    | 0.001-5  | *            |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9      | 0.001-5  | *            |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2   | 0.001-5  | *            |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA           | 0.001-5  | *            |
| Trade Secret                                                                                                                                                                                                      | Trade secret | 0.001-5  | *            |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA           | 0.001-5  | *            |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. First-aid measures

### Description of first aid measures

|                                           |                                                                                                                                                                  |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b>                     | IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.                                                  |
| <b>Inhalation</b>                         | If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. If symptoms persist, call a physician.            |
| <b>Eye contact</b>                        | Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.                                             |
| <b>Skin contact</b>                       | Wash skin with soap and water.                                                                                                                                   |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.                                               |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid breathing |

dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. See section 8 for more information.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. Difficulty in breathing.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**5. Fire-fighting measures**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** Avoid generation of dust. Fine dust dispersed in air may ignite.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation. Avoid generation of dust. Avoid contact with eyes. Use personal protective equipment as required. Do not breathe dust. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.

**Other information** Refer to protective measures listed in Sections 7 and 8.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so. Prevent dust cloud.

**Methods for cleaning up** Take up with inert, damp, non-combustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal. Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid generation of dust. Do not breathe dust. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

## 8. Exposure controls/personal protection

### Working area parameters, subject to mandatory control (MAC or TSEL)

#### Exposure Limits

| Chemical name                    | ACGIH TLV                                                                                                                  | OSHA PEL                                                                                                                                                                                                    | NIOSH                                                                                         |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |
| Diatomaceous Earth<br>61790-53-2 | -                                                                                                                          | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA | -                                                                                             |
| Ferrous Sulfate<br>17375-41-6    | TWA: 1 mg/m <sup>3</sup> Fe                                                                                                | (vacated) TWA: 1 mg/m <sup>3</sup> Fe                                                                                                                                                                       | TWA: 1 mg/m <sup>3</sup> Fe                                                                   |
| Manganese Sulfate<br>10034-96-5  | TWA: 0.02 mg/m <sup>3</sup> Mn respirable particulate matter<br>TWA: 0.1 mg/m <sup>3</sup> Mn inhalable particulate matter | (vacated) Ceiling: 5 mg/m <sup>3</sup><br>Ceiling: 5 mg/m <sup>3</sup> Mn                                                                                                                                   | IDLH: 500 mg/m <sup>3</sup> Mn<br>TWA: 1 mg/m <sup>3</sup> Mn<br>STEL: 3 mg/m <sup>3</sup> Mn |
| Calcium Carbonate<br>471-34-1    | -                                                                                                                          | TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 15 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction            | TWA: 10 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable dust              |

| Chemical name                     | ACGIH TLV                                                                                                          | OSHA PEL                                                                                                                                                                                                                                                                                                                  | NIOSH                                                                                                                                          |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Zinc Oxide<br>1314-13-2           | STEL: 10 mg/m <sup>3</sup> respirable particulate matter<br>TWA: 2 mg/m <sup>3</sup> respirable particulate matter | TWA: 5 mg/m <sup>3</sup> fume<br>TWA: 15 mg/m <sup>3</sup> total dust<br>TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) TWA: 5 mg/m <sup>3</sup> fume<br>(vacated) TWA: 10 mg/m <sup>3</sup> total dust<br>(vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction<br>(vacated) STEL: 10 mg/m <sup>3</sup> fume | IDLH: 500 mg/m <sup>3</sup><br>Ceiling: 15 mg/m <sup>3</sup> dust<br>TWA: 5 mg/m <sup>3</sup> dust and fume<br>STEL: 10 mg/m <sup>3</sup> fume |
| Cobalt Carbonate<br>51839-24-8    | TWA: 0.02 mg/m <sup>3</sup> Co inhalable particulate matter                                                        | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Copper Sulfate<br>7758-99-8       | TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                                          | -                                                                                                                                                                                                                                                                                                                         | IDLH: 100 mg/m <sup>3</sup> Cu dust and mist<br>TWA: 1 mg/m <sup>3</sup> Cu dust and mist                                                      |
| Potassium Iodide<br>7681-11-0     | TWA: 0.01 ppm inhalable fraction and vapor                                                                         | -                                                                                                                                                                                                                                                                                                                         | -                                                                                                                                              |
| Vitamin B12 Supplement<br>68-19-9 | -                                                                                                                  | TWA: 5 mg/m <sup>3</sup> CN<br>(vacated) TWA: 5 mg/m <sup>3</sup> S* as CN                                                                                                                                                                                                                                                | IDLH: 25 mg/m <sup>3</sup> CN                                                                                                                  |
| Diatomaceous Earth<br>61790-53-2  | -                                                                                                                  | TWA: 20 mppcf<br>TWA: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup><br>(vacated) TWA: 6 mg/m <sup>3</sup><br>Silica, amorphous <1%<br>Crystalline silica<br>: (80)/(%) SiO <sub>2</sub> mg/m <sup>3</sup> TWA                                                                                                               | -                                                                                                                                              |

**Biological occupational exposure limits**

| Chemical name                  | ACGIH                                                      |
|--------------------------------|------------------------------------------------------------|
| Cobalt Carbonate<br>51839-24-8 | 15 µg/L - urine (Cobalt) - end of shift at end of workweek |

**Appropriate engineering controls**

**Engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Hand protection** Wear suitable gloves.

**Skin and body protection** Wear suitable protective clothing.

|                                       |                                                                                                                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory protection</b>         | No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.                       |
| <b>General hygiene considerations</b> | Do not breathe dust. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Avoid breathing dust/fume/gas/mist/vapors/spray. |

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                       |                           |
|-----------------------|---------------------------|
| <b>Physical state</b> | Solid                     |
| <b>Appearance</b>     | No information available. |
| <b>Color</b>          | No information available  |
| <b>Odor</b>           | Odorless                  |
| <b>Odor threshold</b> | No information available. |

| <u>Property</u>                        | <u>Values</u>     | <u>Remarks • Method</u> |
|----------------------------------------|-------------------|-------------------------|
| pH                                     | No data available | None known              |
| Melting point / freezing point         | No data available | None known              |
| Boiling point / boiling range          | No data available | None known              |
| Flash point                            | No data available | None known              |
| Evaporation rate                       | No data available | None known              |
| Flammability                           | No data available | None known              |
| Flammability Limit in Air              |                   | None known              |
| Upper flammability or explosive limits | No data available |                         |
| Lower flammability or explosive limits | No data available |                         |
| Vapor pressure                         | No data available | None known              |
| Relative vapor density                 | No data available | None known              |
| Relative density                       | No data available | None known              |
| Water solubility                       | No data available | None known              |
| Solubility(ies)                        | No data available | None known              |
| Partition coefficient                  | No data available | None known              |
| Autoignition temperature               | No data available | None known              |
| Decomposition temperature              |                   | None known              |
| Kinematic viscosity                    | No data available | None known              |
| Dynamic viscosity                      | No data available | None known              |

### Other information

|                             |                           |
|-----------------------------|---------------------------|
| <b>Explosive properties</b> | No information available  |
| <b>Oxidizing properties</b> | No information available  |
| <b>Softening point</b>      | No information available. |
| <b>Molecular weight</b>     | No information available. |
| <b>VOC content</b>          | No information available  |
| <b>Liquid Density</b>       | No information available. |
| <b>Bulk density</b>         | No information available. |

## 10. Stability and reactivity

|                   |                           |
|-------------------|---------------------------|
| <b>Reactivity</b> | No information available. |
|-------------------|---------------------------|

|                                           |                                                 |
|-------------------------------------------|-------------------------------------------------|
| <b>Chemical stability</b>                 | Stable under normal conditions.                 |
| <b>Possibility of hazardous reactions</b> | None under normal processing.                   |
| <b>Conditions to avoid</b>                | Excessive heat. Heating in air. Dust formation. |
| <b>Incompatible materials</b>             | None known based on information supplied.       |
| <b>Hazardous decomposition products</b>   | None known based on information supplied.       |

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

|                     |                                                                                                                                                            |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Harmful by inhalation. (based on components). |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available.                                                                                          |
| <b>Skin contact</b> | Specific test data for the substance or mixture is not available. Causes mild skin irritation. May be harmful in contact with skin.                        |
| <b>Ingestion</b>    | May be harmful if swallowed.                                                                                                                               |

### Symptoms related to the physical, chemical and toxicological characteristics

|                 |                                                                                |
|-----------------|--------------------------------------------------------------------------------|
| <b>Symptoms</b> | Prolonged contact may cause redness and irritation. Coughing and/ or wheezing. |
|-----------------|--------------------------------------------------------------------------------|

### Acute toxicity

#### Numerical measures of toxicity

#### The following ATE values have been calculated for the mixture

|                                      |                |
|--------------------------------------|----------------|
| <b>ATEmix (oral)</b>                 | 3,628.80 mg/kg |
| <b>ATEmix (dermal)</b>               | 2,530.10 mg/kg |
| <b>ATEmix (inhalation-gas)</b>       | 99,999.00 ppm  |
| <b>ATEmix (inhalation-dust/mist)</b> | 3.80 mg/l      |
| <b>ATEmix (inhalation-vapor)</b>     | 99,999.00 mg/l |

#### Unknown acute toxicity

70.90327 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

#### Component Information

| Chemical name                   | Oral LD50            | Dermal LD50          | Inhalation LC50      |
|---------------------------------|----------------------|----------------------|----------------------|
| Calcium Carbonate<br>471-34-1   | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | > 3 mg/L ( Rat ) 4 h |
| Potassium Chloride<br>7447-40-7 | = 2600 mg/kg ( Rat ) | -                    | -                    |

| Chemical name                     | Oral LD50            | Dermal LD50                               | Inhalation LC50                      |
|-----------------------------------|----------------------|-------------------------------------------|--------------------------------------|
| Choline Chloride<br>67-48-1       | = 3400 mg/kg ( Rat ) | -                                         | -                                    |
| Mineral Oil<br>8042-47-5          | > 5000 mg/kg ( Rat ) | -                                         | -                                    |
| Ferrous Sulfate<br>17375-41-6     | = 319 mg/kg ( Rat )  | -                                         | -                                    |
| Manganese Sulfate<br>10034-96-5   | = 782 mg/kg ( Rat )  | -                                         | > 4.45 mg/L ( Rat ) 4 h              |
| Calcium Carbonate<br>471-34-1     | = 6450 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 3 mg/L ( Rat ) 4 h                 |
| Niacin Supplement<br>59-67-6      | = 7 g/kg ( Rat )     | > 2000 mg/kg ( Rat )                      | > 3.8 mg/L ( Rat ) 4 h               |
| Vitamin E Supplement<br>7695-91-2 | -                    | > 3000 mg/kg ( Rat )                      | -                                    |
| Vitamin A Supplement<br>127-47-9  | = 4980 mg/kg ( Rat ) | -                                         | -                                    |
| Zinc Oxide<br>1314-13-2           | > 5000 mg/kg ( Rat ) | > 2000 mg/kg ( Rat )                      | > 5700 mg/m <sup>3</sup> ( Rat ) 4 h |
| Copper Sulfate<br>7758-99-8       | = 960 mg/kg ( Rat )  | > 8 g/kg ( Rabbit )                       | -                                    |
| Calcium Pantothenate<br>137-08-6  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Riboflavin Supplement<br>83-88-5  | > 10 g/kg ( Rat )    | -                                         | -                                    |
| Vitamin D3 Supplement<br>67-97-0  | = 42 mg/kg ( Rat )   | = 61 mg/kg ( Rat )<br>= 185 mg/kg ( Rat ) | 0.13 - 0.38 mg/L ( Rat ) 4 h         |
| Potassium Iodide<br>7681-11-0     | -                    | > 2000 mg/kg ( Rat )                      | -                                    |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Classification based on data available for ingredients. May cause skin irritation.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Contains a known or suspected carcinogen. Classification based on data available for ingredients. May cause cancer.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name                         | ACGIH | IARC    | NTP | OSHA |
|---------------------------------------|-------|---------|-----|------|
| Diatomaceous Earth<br>61790-53-2      | -     | Group 3 | -   | X    |
| Menadione Sodium<br>Bisulfite Complex | -     | Group 3 | -   | -    |

| Chemical name                     | ACGIH | IARC     | NTP                    | OSHA |
|-----------------------------------|-------|----------|------------------------|------|
| 130-37-0                          |       |          |                        |      |
| Cobalt Carbonate<br>51839-24-8    | A3    | Group 2B | Reasonably Anticipated | X    |
| Vitamin B12 Supplement<br>68-19-9 | -     | Group 2B | Reasonably Anticipated | X    |
| Diatomaceous Earth<br>61790-53-2  | -     | Group 3  | -                      | X    |

**Legend**
**ACGIH (American Conference of Governmental Industrial Hygienists)**

A3 - Animal Carcinogen

**IARC (International Agency for Research on Cancer)**

Group 2B - Possibly Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

**NTP (National Toxicology Program)**

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

**Occupational Safety and Health Administration of the US Department of Labor**

X - Present

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Target organ effects** Liver, Respiratory system, Eyes, Skin, Gastrointestinal tract (GI).

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

**12. Ecological information**
**Ecotoxicity** Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

| Chemical name                   | Algae/aquatic plants                              | Fish                                                                        | Toxicity to microorganisms | Crustacea                                                                       |
|---------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------|
| Potassium Chloride<br>7447-40-7 | EC50: =2500mg/L (72h,<br>Desmodesmus subspicatus) | LC50: 750 - 1020mg/L<br>(96h, Pimephales promelas)<br>LC50: =1060mg/L (96h, | -                          | EC50: =825mg/L (48h,<br>Daphnia magna)<br>EC50: =83mg/L (48h,<br>Daphnia magna) |

| Chemical name                     | Algae/aquatic plants                           | Fish                                                                                                                                                                                                                                                                                                        | Toxicity to microorganisms | Crustacea                                                                                      |
|-----------------------------------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------|
|                                   |                                                | Lepomis macrochirus)                                                                                                                                                                                                                                                                                        |                            |                                                                                                |
| Choline Chloride<br>67-48-1       | EC50: >500mg/L (72h, Desmodemus subspicatus)   | -                                                                                                                                                                                                                                                                                                           | -                          | EC50: >320mg/L (48h, Daphnia magna)<br>EC50: >500mg/L (48h, Daphnia magna Straus)              |
| Mineral Oil<br>8042-47-5          | -                                              | LC50: >10000mg/L (96h, Lepomis macrochirus)                                                                                                                                                                                                                                                                 | -                          | -                                                                                              |
| Ferrous Sulfate<br>17375-41-6     | -                                              | LC50: =0.56mg/L (96h, Cyprinus carpio)<br>LC50: =925mg/L (96h, Poecilia reticulata)                                                                                                                                                                                                                         | -                          | EC50: 6.15 - 9.26mg/L (48h, Daphnia magna)<br>EC50: =152mg/L (48h, Daphnia magna)              |
| Niacin Supplement<br>59-67-6      | EC50: =89.93mg/L (72h, Desmodemus subspicatus) | LC50: =520mg/L (96h, Salmo trutta)                                                                                                                                                                                                                                                                          | -                          | EC50: =77mg/L (48h, Daphnia magna)                                                             |
| Vitamin E Supplement<br>7695-91-2 | -                                              | LC50: >100mg/L (96h, Oncorhynchus mykiss)                                                                                                                                                                                                                                                                   | -                          | -                                                                                              |
| Vitamin A Supplement<br>127-47-9  | -                                              | LC50: =1.37mg/L (96h, Oncorhynchus mykiss)                                                                                                                                                                                                                                                                  | -                          | -                                                                                              |
| Zinc Oxide<br>1314-13-2           | -                                              | LC50: =1.55mg/L (96h, Danio rerio)                                                                                                                                                                                                                                                                          | -                          | -                                                                                              |
| Copper Sulfate<br>7758-99-8       | -                                              | LC50: 0.09 - 0.19mg/L (96h, Oncorhynchus mykiss)<br>LC50: 0.1478 - 0.165mg/L (96h, Oncorhynchus mykiss)<br>LC50: 0.66 - 1.15mg/L (96h, Lepomis macrochirus)<br>LC50: 0.96 - 1.8mg/L (96h, Lepomis macrochirus)<br>LC50: =0.1mg/L (96h, Oncorhynchus mykiss)<br>LC50: =0.6752mg/L (96h, Pimephales promelas) | -                          | EC50: 0.0058 - 0.0073mg/L (48h, Daphnia magna)<br>EC50: 0.147 - 0.227mg/L (48h, Daphnia magna) |
| Potassium Iodide<br>7681-11-0     | -                                              | LC50: >100mg/L (96h, Danio rerio)                                                                                                                                                                                                                                                                           | -                          | -                                                                                              |

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

| Chemical name               | Partition coefficient |
|-----------------------------|-----------------------|
| Choline Chloride<br>67-48-1 | -3.77                 |
| Mineral Oil<br>8042-47-5    | >6                    |
| Niacin Supplement           | -0.59                 |

| Chemical name                     | Partition coefficient |
|-----------------------------------|-----------------------|
| 59-67-6                           |                       |
| Vitamin A Supplement<br>127-47-9  | 9.4                   |
| Vitamin B12 Supplement<br>68-19-9 | 3.57                  |

**Other adverse effects** No information available.

### 13. Disposal considerations

#### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

### 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated  
Technical Name

**ICAO (air)** Not regulated

**IATA** Not regulated

**IMDG** Not regulated

**RID** Not regulated

**ADR** Not regulated

**ADN** Not regulated

### 15. Regulatory information

#### International Inventories

**TSCA** Contact supplier for inventory compliance status.

| Chemical name                                                                                                                                                                                                     | CAS No.    | Inventory Listing Status | Commercial Activity Designation |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------|
| Potassium Sulfate, Magnesium Sulfate                                                                                                                                                                              | 14977-37-8 | -                        | Unknown                         |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Magnesium-Mica                                                                                                                                                                                                    | NA         | -                        | Unknown                         |
| Potassium Chloride                                                                                                                                                                                                | 7447-40-7  | Present                  | Active                          |
| Choline Chloride                                                                                                                                                                                                  | 67-48-1    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Menadione Sodium Bisulfite Complex                                                                                                                                                                                | 130-37-0   | Present                  | Active                          |
| Mineral Oil                                                                                                                                                                                                       | 8042-47-5  | Present                  | Active                          |
| Ferrous Sulfate                                                                                                                                                                                                   | 17375-41-6 | Present                  | Active                          |
| Manganese Sulfate                                                                                                                                                                                                 | 10034-96-5 | Present                  | Active                          |
| Calcium Carbonate                                                                                                                                                                                                 | 471-34-1   | Present                  | Active                          |
| Niacin Supplement                                                                                                                                                                                                 | 59-67-6    | Present                  | Active                          |
| Rice Hulls                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Lactic Acid                                                                                                                                                                                                       | NA         | -                        | Unknown                         |
| Vitamin E Supplement                                                                                                                                                                                              | 7695-91-2  | Present                  | Active                          |
| Vitamin A Supplement                                                                                                                                                                                              | 127-47-9   | Present                  | Active                          |
| Zinc Oxide                                                                                                                                                                                                        | 1314-13-2  | Present                  | Active                          |
| Cobalt Carbonate                                                                                                                                                                                                  | 51839-24-8 | Present                  | Active                          |
| Zinc Amino Acid Complex                                                                                                                                                                                           | NA         | -                        | Unknown                         |
| Manganese Amino Acid Complex                                                                                                                                                                                      | NA         | -                        | Unknown                         |
| Copper Sulfate                                                                                                                                                                                                    | 7758-99-8  | Present                  | Active                          |
| Copper Amino Acid Complex                                                                                                                                                                                         | N/A        | -                        | Unknown                         |
| Calcium Pantothenate                                                                                                                                                                                              | 137-08-6   | Present                  | Active                          |
| Dried Whey                                                                                                                                                                                                        | NA         | -                        | Unknown                         |
| Riboflavin Supplement                                                                                                                                                                                             | 83-88-5    | Present                  | Active                          |
| Vitamin D3 Supplement                                                                                                                                                                                             | 67-97-0    | Present                  | Active                          |
| Potassium Iodide                                                                                                                                                                                                  | 7681-11-0  | Present                  | Active                          |
| Vitamin B12 Supplement                                                                                                                                                                                            | 68-19-9    | Present                  | Active                          |
| Diatomaceous Earth                                                                                                                                                                                                | 61790-53-2 | Present                  | Active                          |
| Trade Secret                                                                                                                                                                                                      | -          | Present                  | Active                          |
| Origanum Oil, Thyme White Oil, Cinnamaldehyde                                                                                                                                                                     | NA         | -                        | Unknown                         |
| Dried Bifidobacterium longum Fermentation Product, Dried Bifidobacterium thermophilum Fermentation Product, Dried Enterococcus faecium Fermentation Product, Dried Lactobacillus acidophilus Fermentation Product | NA         | -                        | Unknown                         |

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

**DSL/NDSL**  
**EINECS/ELINCS**  
**ENCS**  
**IECSC**  
**KECL**  
**PICCS**  
**AIIC**

Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.  
 Contact supplier for inventory compliance status.

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing Chemicals Inventory

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AIIC** - Australian Inventory of Industrial Chemicals

**US Federal Regulations**
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name                    | SARA 313 - Threshold Values % |
|----------------------------------|-------------------------------|
| Manganese Sulfate - 10034-96-5   | 1.0                           |
| Zinc Oxide - 1314-13-2           | 1.0                           |
| Cobalt Carbonate - 51839-24-8    | 0.1                           |
| Copper Sulfate - 7758-99-8       | 1.0                           |
| Vitamin B12 Supplement - 68-19-9 | 1.0                           |
|                                  | 0.1                           |

**SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical name                     | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-----------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Ferrous Sulfate<br>17375-41-6     | 1000 lb                     | -                      | -                         | X                          |
| Zinc Oxide<br>1314-13-2           | -                           | X                      | -                         | -                          |
| Copper Sulfate<br>7758-99-8       | 10 lb                       | X                      | -                         | X                          |
| Vitamin B12 Supplement<br>68-19-9 | -                           | X                      | X                         | -                          |

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

| Chemical name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ) |
|---------------|--------------------------|------------------------------------|--------------------------|
|---------------|--------------------------|------------------------------------|--------------------------|

| Chemical name                 | Hazardous Substances RQs | Extremely Hazardous Substances RQs | Reportable Quantity (RQ)                  |
|-------------------------------|--------------------------|------------------------------------|-------------------------------------------|
| Ferrous Sulfate<br>17375-41-6 | 1000 lb                  | -                                  | RQ 1000 lb final RQ<br>RQ 454 kg final RQ |
| Copper Sulfate<br>7758-99-8   | 10 lb                    | -                                  | RQ 10 lb final RQ<br>RQ 4.54 kg final RQ  |

### US State Regulations

#### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

| Chemical name                     | New Jersey | Massachusetts | Pennsylvania |
|-----------------------------------|------------|---------------|--------------|
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Diatomaceous Earth<br>61790-53-2  | X          | -             | -            |
| Ferrous Sulfate<br>17375-41-6     | X          | X             | X            |
| Manganese Sulfate<br>10034-96-5   | X          | -             | X            |
| Calcium Carbonate<br>471-34-1     | X          | X             | X            |
| Zinc Oxide<br>1314-13-2           | X          | X             | X            |
| Cobalt Carbonate<br>51839-24-8    | X          | -             | X            |
| Copper Sulfate<br>7758-99-8       | X          | X             | X            |
| Vitamin B12 Supplement<br>68-19-9 | X          | -             | X            |

### U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

## **16. Other information**

|                                   |                          |                           |                           |                              |
|-----------------------------------|--------------------------|---------------------------|---------------------------|------------------------------|
| <b>NFPA</b>                       | <b>Health hazards</b> 2  | <b>Flammability</b> 1     | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b>                       | <b>Health hazards</b> 1* | <b>Flammability</b> 0     | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |
| <i>Chronic Hazard Star Legend</i> |                          | * = Chronic Health Hazard |                           |                              |

### Key or legend to abbreviations and acronyms used in the safety data sheet

**Legend Section 8: Exposure controls/personal protection**

TWA

TWA (time-weighted average)

STEL

STEL (Short Term Exposure Limit)

Ceiling                      Maximum limit value                      \*                      Skin designation

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
U.S. Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date**                      28-Jul-2026

**Revision Note**                      No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of Ralco's knowledge, information and belief at the date of preparation. The information provided is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The conditions or methods of said handling, storage, use, and disposal of this product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expenses arising out of or connected with the handling, storage, use, or disposal of this product. The information provided relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**

