

**SAFETY DATA SHEET**

---

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product Identifier:****Rigby Taylor Microflow CXS 4-3-16 + 0.3Fe + TE****1.2 Relevant uses of the substance or mixture and uses advised against:****Supplied for use as a professional use fertiliser****1.3 Details of the supplier of the safety data sheet:****The Nutrel Group  
Park Farm  
Kettlethorpe  
Lincoln  
LN1 2LD****Contact: The Safety Officer  
Phone number: +44 (0) 1522 704747  
Email: Stuart.Rycroft@nutrelgroup.co.uk****1.4 Emergency phone number****Phone number: +44 (0) 1522 704747**

---

**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

CLASSIFICATION according to Regulation EC 1272/2008 Classification, Labelling and Packaging:

**Eye Dam. 1                      H318: Causes serious eye damage.  
Reproductive Tox. 1B        H360FD: May damage fertility. May damage the unborn child.****2.2 Label Elements**

Label elements in accordance with Regulation (EC) No 1272/2008:

**Rigby Taylor Microflow CXS 4-3-16 + 0.3Fe + TE**

(contains: Tripotassium orthophosphate E.C. 231-907-1, disodium octaborate tetrahydrate E.C.)

**Signal word: Danger****Hazard Statements:****H318: Causes serious eye damage.  
H360FD: May damage fertility. May damage the unborn child.****Precautionary Statements****P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove**

contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/attention.  
P310 Immediately call a POISON CENTER/ doctor.  
P501 Dispose of contents/container in accordance with local/regional/ national/international regulations.

## 2.3 Other Hazards






Mixture not classed as PBT or vPvB

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Product Code: -

#### 3.2 Mixtures

#### 3.3 Hazardous components

| Chemical Name                    | CAS-No./ EC-No.          | Annex Index or REACH number  | Pictogram(s) according to 1272/2008:  | H-phrase(s) according to 1272/2008:  | Concentrations [%] |
|----------------------------------|--------------------------|--|---|--|--------------------|
| Tripotassium ortho-phosphate     | 7778-53-2/<br>231-907-1  | -<br><br>REACH no:<br>01-2119971078-30                             | GHS05<br><br><br>GHS07<br> | Eye Dam .1;<br>H318<br>STOT Single<br>Exp. 3; H335                             | 9 - 10             |
| Potassium nitrate                | 7757-79-1/<br>231-818-8  | -<br><br>REACH no.:<br>01-2119488224-35                            | GHS03<br>  | Oxid. Solid 3;<br>H272   | 4 - 5              |
| Potassium carbonate              | 584-08-7/<br>209-529-3   | -<br><br>REACH no:<br>01-2119532646-36                             | GHS07<br>  | Skin Irrit. 2;<br>H315<br>Eye Irrit. 2;<br>H319<br>STOT Single<br>Exp. 3; H335 | 2 - 5              |
| Iron EDTA                        | 68413-60-5/<br>270-232-7 | -<br><br>REACH no:<br>01-2119496227-29                             | -   | Not classified.<br><br>Substance with<br>Workplace<br>Exposure Limit           | 2 - 5              |
| Disodium octaborate tetrahydrate | 12280-03-4/<br>234-541-0 | Index number:<br>005-020-00-3<br><br>REACH no:<br>01-2119490860-33 | GHS08<br>  | Repr. 1B;<br>H360FD  | 0.9 – 1.0          |

The full hazard information for individual components if not displayed in section 2 or 3 are displayed in Section 16.

### 4.0. FIRST AID MEASURES

#### 4.1 Description of first aid measures

#### **4.1.1 Inhalation**

Remove from source of exposure to fresh air; seek medical attention.

#### **4.1.2 Skin & Eye exposure**

Drench immediately with water. Remove any contaminated clothing and launder before re-use. Seek medical attention if symptoms persist or develop.

Eyes: Rinse cautiously for several minutes, Remove contact lenses, if present and easy to do, rinse with clean water for 15 minutes. Seek medical attention IMMEDIATELY.

#### **4.1.3 Ingestion**

Do not induce vomiting. Wash out mouth with water and give water to drink. Obtain medical attention IMMEDIATELY.

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

Causes serious eye damage. May damage fertility. May damage the unborn child.

#### **4.3 Indication of any immediate medical attention and special treatment needed.**

Information not available

---

### 5. FIRE-FIGHTING MEASURES

#### **5.1 Extinguishing media**

Use Foam, carbon dioxide, dry powder, sand. The mixture is not classified as flammable as such extinguishing media should be chosen as appropriate for surrounding materials.

#### **5.2 Special Hazards arising from the substance or mixture**

Possible irritant fumes arising from combustion

#### **5.3 Advice for fire-fighters**

Cool down containers/equipment exposed to heat with a water spray. Contain spread of extinguishing fluids (these fluids may be hazardous for the environment). Wear complete protective clothing and self-contained breathing apparatus

---

### 6. ACCIDENTAL RELEASE MEASURES

#### **6.1 Personal precautions, protective equipment and emergency procedures**

The following precautions are considered to be good practice when using any chemicals irrespective of their classification unless otherwise specified.

Use personal protective equipment

- appropriate coveralls and gloves
- eye/face protection
- appropriate respirator

Avoid contact with skin and eyes.

#### **6.2 Environmental Precautions**

Do not allow to enter storm drains or water courses. If this product enters a water course or a sewer (including via contaminated soil & vegetation) contact local water authority and inform the Environment Agency

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

Use soil, sand or other absorbent material. Contact specialist waste disposal contractor.

#### **6.4 Reference to other sections**

No reference necessary

---

### 7. HANDLING AND STORAGE

#### **7.1 Precaution for safe handling**

Avoid contact with skin and eyes. Wash Hands thoroughly after handling

Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a cool dry atmosphere, in original labelled containers. Refer to manufacturer for maximum safe stacking height. Keep away from heat sources, combustible materials.

### 7.3 Specific end use(s)

Supplied for use as a professional use fertiliser.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control Parameters

#### Tripotassium orthophosphate:

Workers – Hazard via inhalation route:

DNEL 8.17 mg/m<sup>3</sup>

General population – Hazard via inhalation route:

DNEL 2.01 mg/m<sup>3</sup>

#### Potassium nitrate:

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal 20,8 mg/kg bodyweight/day

Long-term - systemic effects, inhalation 36,7 mg/m<sup>3</sup>

DNEL/DMEL (General population)

Acute - systemic effects, oral 12,5 mg/kg bodyweight

Long-term - systemic effects, inhalation 10,9 mg/m<sup>3</sup>

Long-term - systemic effects, dermal 12,5 mg/kg bodyweight/day

PNEC (Water)

PNEC aqua (freshwater) 0,45 mg/l

PNEC aqua (marine water) 0,045 mg/l

PNEC aqua (intermittent, freshwater) 4,5 mg/l

PNEC (STP)

PNEC sewage treatment plant 18 mg/l

**Source:** Potassium nitrate SDS, Haifa 18/02/2013

#### Potassium carbonate :

Occupational exposure limit values: none

#### DNELs:

|          |            |           |               |                       |
|----------|------------|-----------|---------------|-----------------------|
| Industry | Dermal     | Long Term | Local Effects | 16 mg/cm <sup>2</sup> |
| Industry | Inhalation | Long Term | Local Effects | 10 mg/m <sup>3</sup>  |
| Consumer | Dermal     | Long Term | Local Effects | 8 mg/cm <sup>2</sup>  |
| Consumer | Inhalation | Long Term | Local Effects | 10 mg/m <sup>3</sup>  |

**Source:** Potassium carbonate SDS, Norkem, 26/06/18, Revision 5

#### Iron EDTA:

Workplace exposure Limits as defined by UK HSE in document EH40/2005 where available:

| Substance | CAS number | Workplace Exposure Limit                                |                    |   |                    | Comments   |
|-----------|------------|---|--------------------|---|--------------------|--|
|           |            | Long-term exposure limit<br>(8-hr TWA reference period) |                    | Short-term exposure limit<br>(15 minute reference period) |                    |  |
|           |            | ppm   | mg.m <sup>-3</sup> | ppm   | mg.m <sup>-3</sup> |  |
|           |            |   |                    |   |                    | The Carc, Sen and Sk notations are not exhaustive. Notations have been applied to the substances identified in IOELV Directives* |

|                    |   |   |   |   |   |   |
|--------------------|---|---|---|---|---|---|
| Iron salts (as Fe) | - | - | 1 | - | 2 | - |
|--------------------|---|---|---|---|---|---|

\*IOELV – Indicative Occupational Exposure Limit Values (IOLEV).

DNEL:

Workers - Hazard via inhalation route (long term exposure, systemic effect) – 2 mg/m<sup>3</sup>  
 Workers - Hazard via inhalation route (acute/short term exposure, local effect) – 69 mg/m<sup>3</sup>  
 Workers - Hazard via dermal route (long term exposure, systemic effect) - 3960 mg/kg bw/day  
 General population - Hazard via inhalation route (long term exposure, systemic effect) – 0.47 mg/m<sup>3</sup>  
 General population - Hazard via dermal route (long term exposure, systemic effect) - 1980 mg/kg bw/day  
 General population - Hazard via oral route (long term exposure, systemic effect) – 0.4 mg/kg bw/day

PNEC:

PNEC aqua (freshwater) – 2,9 mg/L  
 PNEC aqua (marine water) – 0,29 mg/L  
 PNEC aqua (intermittent releases) – 0,95 mg/L  
 PNEC STP – 60,4 mg/L  
 Sediment (freshwater) – No or insufficient data available  
 Sediment (marine water) - No or insufficient data available  
 PNEC secondary poisoning – No potential for bioaccumulation

**Source: Iron EDTA SDS, ADOB 08.06.2018 Version 2**

**Disodium octaborate tetrahydrate:**

DNEL:

Employees:

Long term systematic effects (cutis): 326 mg/kg body weight/day  
 Long term systematic effects (inhaling): 6.9 mg/m<sup>3</sup>

Population:

Acute systematic effects (oral): 0.81 mg/kg body weight/day  
 Long term systematic effects (cutis): 163.3 mg/kg body weight/day  
 Long term systematic effects (inhaling): 3.5 mg/m<sup>3</sup>  
 Long term systematic effects (oral): 0.81 mg/kg body weight/day

PNEC:

PNEC freshwater = 2.9 mg B/L  
 PNEC seawater = 2.9 mg B/L  
 PNEC soil = 5.7 mg B/kg dw  
 PNEC wastewater treatment = 10 mg /L

**Source: Superflor 21% Boron Soluble Powder SDS, CMI Jan 2019**

## 8.2 Exposure controls

Goggles – Eye Protection : goggles/face shield to BS EN166.  
 Gloves – BS EN374 – chemical protection.  
 Respirators – BS approved protection device with P3 filter.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

**Appearance;** Brown solution

**Odour;** Information not specified

**Odour threshold;** Information not specified

**pH;** 8.5 – 9.5

**Melting point/freezing;** Information not specified

**Initial boiling point and boiling range;** Information not specified

**Flash point;** Information not specified

**Evaporation rate;** Information not specified

**Flammability (solid, gas);** Information not specified

**Upper /lower flammability or explosive limits;** Information not specified

**Vapour Pressure;** Information not specified

**Vapour density;** Information not specified

**Specific gravity;** 1.28 – 1.32

**Solubility (ies);** Information not specified

**Partition coefficient: n-octanol/water;** Information not specified

**Auto ignition temperature:** Information not specified

**Decomposition temperature:** Information not specified

## 9.2 Other Information

No other relevant information available

---

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Unknown

### 10.2 Chemical Stability

Stable under normal conditions

### 10.3 Possibility of hazardous reactions

Information not available

### 10.4 Conditions to avoid

Extremes of temperature

### 10.5 Incompatible materials

None Known

### 10.6 Hazardous decomposition products

Possible Irritant fumes

---

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

The mixture has not been assessed for toxicological effects, the mixture classification is given in section 2 based on individual component contents. Individual component hazards are given in section 3

|                                    |  |
|------------------------------------|--|
| Acute toxicity:                    | Not expected to be toxic.  |
| Skin corrosion/irritation:         | Product is not classified as causing skin corrosion or irritation, |
| Serious eye damage/irritation:     | Product is classified as causing serious eye damage category 1.    |
| Respiratory or skin sensitisation: | Product is not classified for respiratory or skin sensitisation.   |
| Germ cell mutagenicity:            | No information specified.  |
| Carcinogenicity:                   | No information specified.  |
| Reproductive toxicity:             | Product is classified as reproductive toxicity category 1B         |
| STOT-single exposure:              | No information specified.  |

STOT-repeated exposure: No information specified.  
Aspiration hazard: No information specified.

**Toxicological information on hazardous ingredients where available:**

**Potassium nitrate:**

|                            |                             |
|----------------------------|-----------------------------|
| LD50 oral rat              | 3750 mg/kg (OECD 405)       |
| LD50 dermal rat            | > 5000 mg/kg (OECD 402)     |
| LC50 inhalation rat (mg/l) | > 0.527 mg/l/4hr (OECD 403) |
| ATE (oral)                 | 3750 mg/Kg                  |

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)  
pH: 6 - 9 (5 %)

Explanation skin corrosion/irritation: OECD 402 : Data obtained by analogy conclusion

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)  
pH: 6 - 9 (5 %)

Explanation serious eye damage/irritation: OECD Guideline 437/405/EU B.5.

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Explanation respiratory or skin sensitisation: OECD Guideline 429/EU B.42

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

Explanation reproductive toxicity

NOAEL: 1,500 mg/kg/day (general toxicity / reproduction/developmental toxicity)

Specific target organ toxicity (single exposure) : Not classified (Based on available data, the classification criteria are not met)

Specific target organ toxicity (repeated exposure): Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Explanation aspiration hazard: Data lacking

Potential Adverse human health effects and symptoms: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

**Source:** Potassium nitrate SDS, Haifa 18/02/2013 Version 4.0

**Potassium carbonate:**

**Acute toxicity:**

Acute Toxicity (Oral LD50) > 2000 mg/kg Rat  
Not classified. Test method(s): equivalent or similar to OECD 401.

Acute Toxicity (Dermal LD50) > 2000 mg/kg Rabbit  
Not classified. Test method(s): US EPA Pesticide Assessment Guidelines.

Acute Toxicity (Inhalation LC50) > 4.96 mg/l (dust/mist) Rat 4 hours  
Not classified. Test method(s): US EPA Pesticide Assessment Guidelines.

**Skin Corrosion/Irritation:**

Test method(s): Not applicable.

Causes skin irritation.

**Serious eye damage/irritation:**

Causes serious eye irritation.

**Respiratory or skin sensitisation:**

Skin sensitisation

Buehler test: Guinea Pig

Not Classified / Not Sensitising.

**Germ cell mutagenicity:**

Genotoxicity - In Vitro

Gene Mutation:

Test method(s): equivalent or similar to OECD 471.

Negative.

Genotoxicity - In Vivo

No information required.

**Carcinogenicity:**

Carcinogenicity

NOAEL 2667 mg/kg Oral Rat

Read-across data: Potassium hydrogencarbonate EC#206-059-0

**Reproductive Toxicity:**

Reproductive toxicity - fertility Endpoint waived according to REACH Annex VII, IX or XI.

Reproductive toxicity -

development

Teratogenicity: - NOAEL: 180 mg/kg, Oral, Rat

Test method(s): equivalent or similar to OECD 414.

Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**

STOT - single exposure May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

STOT - repeated exposure NOAEL 2667 mg/kg, Oral, Rat

Weight of evidence.

Based on available data the classification criteria are not met.

**Aspiration hazard:**

Not applicable.

General information:

Inhalation May cause respiratory system irritation.

Ingestion May cause discomfort if swallowed.

Skin contact Irritating to skin.

Eye contact Irritating to eyes.

**Source: Potassium carbonate SDS, Norkem, 26/06/18, Revision 5**

**Disodium octaborate tetrahydrate:****Acute toxicity:**

Ingestion:

Male / female rats FIFRA (40 CFR). Testing material (CE name): Disodium Octaborate

LD50: 2.55 g/kg (male/female) (according to the Litchfield y Wilcoxon method)

Male rat. 401 guide (Acute oral toxicity) of OCDE. Testing material (CE name): Disodium Octaborate

LD50: de > body weight 2600 mg/kg (male) (There were no deaths at this dosage level.)

Male / female rats. Testing material (CAS number): 10043-35-3

LD50: 3450 mg/kg body weight (male) (mg of boric acid / kg)

LD50: 4080 mg/kg body weight (female). (mg of boric acid / kg of body weight)

Male rat. 401 guide (Acute oral toxicity) of OCDE. Testing material (CAS number): 1330-43-4

LD50: > 2500 mg/kg body weight

**Skin:**

Rabbit (White New Zealand) male / female. FIFRA (40 CFR 158, 162);



TSCA (40 CFR 798) equivalent or similar to 402 Guide (acute cutis toxicity) of OCDE. Testing material (EC name): Disodium Octaborate.

LD50: > 2000 mg/kg body weight (male / female) (There are no lethal effects in limit doses)

Rabbit (White New Zealand) male / female. FIFRA (40 CFR 163). Testing material (CAS number): 10043-35-3  
LD50: > 2000 mg/kg body weight (male / female)

Rabbit (White New Zealand) male / female. This study was undertaken in order to stick to the EPA guidelines of the U.S. – FIFRA and was undertaken by the US Food and Drug Laboratories for BPL.

Testing material (CAS number): 12179-04-3 LD50: > 2000 mg/kg body weight (male / female)

#### **Inhaling:**

Male / female rats. 403 guide of OCDE (Acute inhalation toxicity)

Testing material (EC name): Disodium Octaborate

LC50 (4 h): > 2.01 mg/L of air (male / female)

Male / female rats. 403 guide of OCDE (Acute inhalation toxicity) Testing material (CAS number): 10043-35-3

LC50 (5 h): > 2.03 mg/L of air (male / female)

Male / female rats. 403 guide of OCDE (Acute inhalation toxicity). USEPA FIFRA 40 CFR Part160. Testing material (CAS number): 10043-35-3

LC50 (4 h): > 2.12 mg/L of air (male / female) (This study was undertaken by petition of the U.S. EPA to confirm that the maximum obtainable dosage was of 2 mg/L. It is considered to be an acceptable study by the U.S. EPA.)

Male / female rats. 403 guide of OCDE (Acute inhalation toxicity) Testing material (CAS number): 12179-04-3  
LC50 (4 h): > 2.04 mg/L of air (nominal) (male / female) (It doesn't have a lethal effect in limit doses).

#### **Skin irritation:**

Skin sensitivity:

Guinea pig (Albino Hartley). Buehler test. 406 guide of OCDE (skin sensitivity). EPA

OPP 81-6 (skin sensitivity). Testing material (EC name): Disodium Octaborate

Positive reaction number: First reading: 3 out of 20 (test group); 24 hours after exposure; dose: 95% of boric acid

Male / female guinea pig (Hartley). Buehler test. 406 guide of OCDE (skin sensitivity).

Testing material: (CAS number): 10043-35-3

Positive reaction number: First reading: 0 out of 20 (test group); 34 hours after exposure; dose: 0.4 g. 95% w/w/boric acid

Male / female guinea pig (Hartley). Buehler test. 406 guide of OCDE (skin sensitivity).

Testing material: (CAS number): 10043-35-3

Positive reaction number: First reading: 0 out of 20 (test group); 34 hours after exposure; dose: 0.4 g. 95% w/w/boric acid

#### **Positive reaction number:**

1st reading: 0 out of 20 (test group); 24 hours after exposure; dose: 0.4 g al 95% w/w

2nd reading: 0 out of 20 (test group); 48 hours after exposure.; dose: 0.4 g al 95% w/w 1st reading: 0 out of 10 (negative control); 24 hours after exposure; dose: Not applicable

2nd reading: 0 out of 10 (negative control); 48 hours after exposure; dose: Not applicable

1st reading: 10 out of 20 (positive control); 24 hours after exposure; dose: Not specified.

2nd reading not specified: 7 out of 20 (positive control); 48 hours after exposure; Dose: Not specified.

2nd reading: 7 out of 20 (positive control); 48 hours after exposure; dose: Not specified.

#### **Eye irritation:**

Rabbit (White New Zealand). Testing material (EC name): Disodium Octaborate

Category III of toxicity – clear cornea from implication or irritation in 7 days or less.

Total irritation count: 3 out of a maximum of 110 (medium) (time point: 24 hours) (completely reversible within 72 hours.)

Rabbit (White New Zealand). FIFRA (40 CFR, 162) and TSCA (40 CFR 798). Testing material (EC name): Disodium Octaborate

Category II of toxicity – the corneal envelope or the irritation disappeared within 8 – 21 days.

Maximum average total points: 16.6 out of a maximum of 110 (medium) (time: 24 hours) (completely reversible within 10 days)

Rabbit (White New Zealand). FIFRA (40 CFR 158, 162); TSCA (40 CFR 798). Although it was not undertaken by following the OCDE protocol, the study was done according to an acceptable protocol and the U.S. EPA confirmed it to have had good practices laboratory norms (40CFR160). Equivalent or similar to the 405 guide of OCDE (irritation/corrosion of eye water) Testing material (CAS number): 10043-35-3 Non-irritating (category III of toxicity - la corneal envelope or irritation disappeared after 7 days or less.)

Total irritation points: 13.6 out of a maximum of 110 (medium)

(Average time: 24, 48, 72 hours) (completely reversible) (the average points of 60 minutes was of 0.17)

Rabbit (White New Zealand). EPA OPPTS 870.2400 (Acute eye irritation). Equivalent or similar to the 405 guide of OCDE (acute eye irritation/corrosion)

Cornea points: 0.22 out of a maximum of 4 (medium) (Average time: 24, 48 and 72 hours) (completely reversible within 14 days)

Iris points: 0.22 out of a maximum of 2 (medium) (Average time: 24, 48 and 72 hours) (completely reversible within 14 days)

Conjunctiva points: 2.8 out of a maximum of 3 (medium) (Average time: 24, 48 and 72 hours) (completely reversible within 14 days)

Chemosis points: 1.89 out of a maximum of 4 (medium) (Average time: 24, 48 and 72 hours) (completely reversible within 14 days).

#### **Sensitivity:**

It is not a cutaneous sensitizer.

#### **Reproduction toxicity:**

Certain studies on food administration in high doses on animals such as rats, mice and dogs showed effects on fertility and testicles. Studies on rats, mice and rabbits have shown that high doses have effects on the development of the foetus and include foetal weight loss and minor variations in the skeleton. The doses administered were equivalent to many times more than the quantity that a human being would normally be exposed to.

#### **Carcinogenicity / mutagenicity:**

It is not carcinogen. / It is not mutagen.

#### **Data on humans:**

Epidemiological studies on human beings do not show an increase on pulmonary disease on the working population with chronic exposure to Disodium Octaborate Tetrahydrate dust. A recent epidemiological study on normal conditions of occupational exposure to borate dusts does not indicate any effect on fertility.

**Source: Superflor 21% Boron Soluble Powder SDS, CMI Jan 2019**

---

## 12. ECOLOGICAL INFORMATION

### **12.1 Toxicity**

**Mixture not classified as harmful to aquatic life**

#### **Ecotoxicological information on hazardous ingredients where available:**

##### **Potassium nitrate:**

LC50 fishes 1 162 mg/l (96 h; Pisces)

LC50 other aquatic organisms 1 39 mg/l (96 h; Daphnia magna)

EC50 other aquatic organisms 1 200 - 1000 mg/l (Plankton)

LC50 fish 2 1378 mg/l (96 h; Poecilia reticulata)

LC50 other aquatic organisms 2 490 mg/l (48 h; Daphnia magna)

TLM fish 1 3000 mg/l (96 h; Lepomis macrochirus)

TLM fish 2 162 mg/l (96 h; Gambusia affinis)

Threshold limit other aquatic organisms 1 39 mg/l (96 h; Daphnia magna)

Threshold limit other aquatic organisms 2 490 mg/l (48 h; Daphnia magna)

**Source:** Potassium nitrate SDS, Haifa 18/02/2013 Version 4.0

**Potassium carbonate:**

Acute Toxicity - Fish

LC50 96 hours 68 mg/l *Onchorhynchus mykiss* (Rainbow trout)

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours > 200 mg/l *Daphnia magna*

Not Classified - Test method(s): US FIFRA Guideline 72-1.

Acute Toxicity - Aquatic Plants

Endpoint waived according to REACH Annex VII, IX or XI.

**Source: Potassium carbonate SDS, Norkem, 26/06/18, Revision 5**

**2.2 Persistence and degradability**

Readily biodegradable

**12.3 Bioaccumulative potential**

Information not available

**12.4 Mobility in soil**

Information not available

**12.5 Results of PBT and vPvB**

Not classified

**12.6 Other adverse effects**

Information not available

---

13. DISPOSAL CONSIDERATIONS

**13.1 Waste Treatment Methods**

Use only licensed waste disposal companies. Do not re-use empty containers for any purpose.

---

14. TRANSPORT INFORMATION

**14.1 UN number:** Product is unclassified for transport

**14.2 UN proper shipping name:** Product is unclassified for transport

**14.3 Transport hazard:** Product is unclassified for transport

**14.4 Packing group:** Product is unclassified for transport

**14.5 Environmental hazards:** Product is unclassified for transport

**14.6 Special precautions for user:** Not specified

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code**

Applicable for Maritime bulk transport only. Check with carrier.

---

15. REGULATORY INFORMATION

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.**

This substance is classified and labelled in accordance with regulation 1272/2008, and the EC Fertiliser Regulations 2003, Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

**15.2 Chemical Safety Assessment**

CSA not undertaken for this substance

---

16. OTHER INFORMATION

**Abbreviations:**

DNEL

Derived No-Effect Level

|                    |   |
|--------------------|---|
| Eye Dam .1         | Eye Damage Category 1                                     |
| Eye Irrit. 2       | Eye Irritation category 2                                 |
| LC/LD50            | Lethal Dose 50%   |
| NOAEL              | No Observed Adverse Effect Level                          |
| OECD               | Organisation for Economic Co-operation and Development    |
| Oxid. Solid 3      | Oxidising Solid category 3                                |
| PNEC               | Predicted No Effect Concentration                         |
| PBT                | Persistent, Bioaccumulative, Toxic                        |
| Repr. 1B           | Reproductive Toxicity Category 1B                         |
| Skin Irrit. 2      | Skin Irritation category 2                                |
| STOT Single Exp. 3 | Specific Target Organ Toxicity Single Exposure Category 3 |
| vPvB               | very Persistent, very Bioaccumulative                     |

**Hazard Information not otherwise listed in full elsewhere:**

|       |                                   |
|-------|-----------------------------------|
| H272: | May intensify fire; oxidiser.     |
| H315: | Causes skin irritation.           |
| H319: | Causes serious eye irritation.    |
| H335: | May cause respiratory irritation. |

**SDS information:**

This safety data sheet is compiled using data submitted for raw materials and practical experience. This product is intended for professional users only.

This Safety Data Sheet is prepared in compliance with Regulation (EC) 1272/2008 and Annex II of the REACH regulation 453/2010.

THE INFORMATION GIVEN HEREIN IS, TO THE BEST OF OUR KNOWLEDGE, CORRECT AND IS PRESENTED IN GOOD FAITH BUT NO WARRANTY, EXPRESSED OR IMPLIED IS GIVEN.

PRINTED : 22 JANUARY 2020