



## Section 1. Identification

**Product name** : **Solubor® Flow**  
**Product type** : Liquid.

### Relevant identified uses of the substance or mixture and uses advised against

**Material uses** : Agriculture

**Supplier's details** : U.S. Borax Inc.  
14486 Borax Road  
Boron, CA 93516-2000  
USA  
+1 (760) 762 7000

**e-mail address of person responsible for this SDS** : rtb.sds@riotinto.com

**Emergency telephone number** : Toll Free (24 Hr)  
+1 866 928 0789  
Non-Toll Free (24 Hr)  
+1 215 207 0061 (Rio Tinto Borates)

For advice on chemical emergencies, spillages, fires or first aid.

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : TOXIC TO REPRODUCTION - Category 2

### GHS label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : Suspected of damaging the unborn child.

### Precautionary statements

**Prevention** : Do not handle until all safety precautions have been read and understood.

**Response** : IF exposed or concerned: Get medical advice/attention.

**Storage** : Not applicable.

**Disposal** : Dispose of contents/container in accordance with local regulation.

## Section 2. Hazards identification

**Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

| Ingredient name                          | %     | CAS number |
|--|-------|------------|
| Pentaboron sodium octaoxide pentahydrate | >52.4 | 12631-71-9 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.**

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Use eye wash fountain or fresh water to cleanse the eye. If irritation persists for more than 30 minutes, seek medical attention.
- Inhalation** : If symptoms such as nose or throat irritation are observed, remove to fresh air.
- Skin contact** : No treatment necessary.
- Ingestion** : Swallowing small quantities (one teaspoon) will cause no harm to healthy adults. If larger amounts are swallowed, give two glasses of water to drink and seek medical attention.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.
- Ingestion** : This product is not intended for ingestion. Small amounts (e.g., a teaspoon) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms. Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.

#### Over-exposure signs/symptoms

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.
- Ingestion** : Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.

## Section 4. First aid measures

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Supportive care only is required for adult ingestion of less than a few grams of the product. For ingestion of larger amounts, maintain fluid and electrolyte balance and maintain adequate kidney function. Gastric lavage is only recommended for heavily exposed, symptomatic patients in whom emesis has not emptied the stomach. Hemodialysis should be reserved for patients with massive acute absorption, especially for patients with compromised renal function. Boron analyses of urine or blood are only useful for verifying exposure and are not useful for evaluating severity of poisoning or as a guide in treatment.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No special protective clothing is required

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : None. The product is not flammable, combustible or explosive.

**Hazardous thermal decomposition products** : None.

**Special protective actions for fire-fighters** : None.

**Special protective equipment for fire-fighters** : Not applicable.

**Remark** : The product is not flammable, combustible or explosive.

**Remark** : Not explosive.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Eye protection according to ANSI Z.87.1 or other national standards.
- For emergency responders** : Eye protection according to ANSI Z.87.1 or other national standards.

**Environmental precautions** : The product is a water-soluble white powder that may cause damage to trees or vegetation by root absorption. Avoid contamination of water bodies during clean up and disposal. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the boron value to its normal environmental background level or meets local water quality standards.

### Methods and materials for containment and cleaning up

## Section 6. Accidental release measures

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Good housekeeping procedures should be followed to minimise dust generation and accumulation. Avoid spills.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : No special handling precautions are required, but dry, indoor storage is recommended. To maintain package integrity and to minimise caking of the product, bags should be handled on a first-in first-out basis.

Storage temperature: Ambient temperature

Storage pressure: Ambient pressure

Special sensitivity: Moisture (Caking)

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

| Ingredient name                          | Exposure limits |
|--|-----------------|
| Pentaboron sodium octaoxide pentahydrate | None.           |

- Recommended monitoring procedures** : In the absence of a national OEL, Rio Tinto Borates recommends and applies internally an Occupational Exposure Limit (OEL) of 1 mg B/m<sup>3</sup>. To convert product into equivalent boron (B) content, multiply by 0.1832

- Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

- Environmental exposure controls** : Limiting releases from site: Where appropriate, material should be recovered and recycled through the process. Spillages of powder or granulated borates should be swept or vacuumed up immediately and placed in containers for disposal in order to prevent unintentional release to the environment. Waste containing borates should be handled as a hazardous waste and removed by licensed operator to an offsite location where it can be incinerated or disposed to a hazardous landfill.

Water Emissions: Storage should be sheltered from precipitation. Avoid spillage into

## Section 8. Exposure controls/personal protection

water and cover drains. Removal from water can only be accomplished by very specific treatment technologies including ion exchange resins, reverse osmosis etc. Removal efficiency is dependent upon a number of factors and will vary from 40 to 90%. Much of the technology is currently not appropriate to high volume or mixed waste streams. Boron is not removed in considerable amounts in conventional STP. If sites discharge to a municipal STP the concentration of boron should not exceed the PNEC in the municipal STP

Air Emissions: Emissions to air can be removed by one or more of the following dust-control measures: electrostatic precipitators, cyclones, fabric or bag filters, membrane filters, ceramic and metal mesh filters, and wet scrubbers

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : No special protective clothing is required.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : Liquid. [Slurry; aqueous suspensions]
- Color** : White.
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : 7 to 8(Slurry)
- Melting point/freezing point** : -3°C (26.6°F)
- Boiling point, initial boiling point, and boiling range** : 100 to 110°C (212 to 230°F)

## Section 9. Physical and chemical properties

- Flash point** : Not applicable.  
**Evaporation rate** : Not applicable.  
**Flammability** : The product is not flammable, combustible or explosive.  
**Lower and upper explosion limit/flammability limit** : Not available.

**Vapor pressure** :

| Ingredient name | Vapor Pressure at 20°C |     |        | Vapor pressure at 50°C |     |        |
|-----------------|------------------------|-----|--------|------------------------|-----|--------|
|                 | mm Hg                  | kPa | Method | mm Hg                  | kPa | Method |
| water           | 23.8                   | 3.2 |        |                        |     |        |

- Relative vapor density** : Not available.  
**Relative density** : 1.3  
**Bulk density** : Not available.  
**Granulometry** : Not available.  
**Solubility** : Soluble in the following materials: cold water and hot water.  
**Solubility in water** : Not available.  
**Partition coefficient: n-octanol/water** : Not applicable.  
**Auto-ignition temperature** : Not applicable.  
**Decomposition temperature** : Not applicable.  
**Viscosity** : Dynamic: Not applicable.  
 Kinematic: Not applicable.  
**Flow time (ISO 2431)** : Not available.  
**Particle characteristics**  
**Median particle size** : Not applicable.

## Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.  
**Chemical stability** : Under ambient temperatures, the product is stable.  
**Possibility of hazardous reactions** : Reaction with strong reducing agents such as metal hydrides or alkali metals will generate hydrogen gas which could create an explosive hazard .  
**Conditions to avoid** : Avoid contact with strong reducing agents by storing according to good industrial practice.  
**Incompatible materials** : Strong reducing agents  
**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

**Absorption** : Absorption of borates via the oral route is nearly 100 %. For the inhalation route also 100 % absorption is assumed as worst case scenario. Dermal absorption through intact skin is very low with a percent dose absorbed of < 0.5 %.

### Acute toxicity

| Product/ingredient name                  | Result                | Species    | Dose  | Exposure |
|--|-----------------------|------------|---|----------|
| Pentaboron sodium octaoxide pentahydrate | LC50 Inhalation Vapor | Rat        | 2.12 mg/l<br>Disodium tetraborate pentahydrate                                    | 4 hours  |
|  | LD50 Dermal           | Rabbit     | >2000 mg/kg body weight   | -        |
|  | LD50 Oral             | Rat - Male | Boric acid<br>3200 to 3400 mg/kg body weight<br>Disodium tetraborate pentahydrate | -        |

**Conclusion/Summary** : No data available on the product itself. Based on the available data, the classification criteria are not met.

### Irritation/Corrosion

| Product/ingredient name                  | Result                | Species                  | Score | Exposure  | Observation |
|--|-----------------------|--------------------------|-------|---|-------------|
| Pentaboron sodium octaoxide pentahydrate | Eyes - No irritation. | New Zealand White Rabbit | <1    | 0.1 g Sodium Pentaborate<br>0.5 g moistened with saline (Disodium tetraborate pentahydrate) | -           |
|  | Skin - No irritation. | New Zealand White Rabbit | -     |   | -           |

### Conclusion/Summary

**Skin** : No data available on the product itself. Based on the lack of dermal irritation responses in the rabbit from dermal exposure, the classification criteria are not met.

**Eyes** : Non-irritating to the eyes. Based on mean scores less than 1, the effects were fully reversible within 7 days. Based on the available data, the classification criteria are not met.

**Respiratory** : Not available.

### Sensitization

| Product/ingredient name           | Route of exposure | Species    | Result          |
|-----------------------------------|-------------------|------------|-----------------|
| Disodium tetraborate pentahydrate | skin              | Guinea pig | Not sensitizing |

### Conclusion/Summary

**Skin** : There are no data available on the mixture itself. There are no data to suggest that disodium tetraborates or Pentaboron sodium octaoxide pentahydrate are skin or respiratory sensitizers. Based on the available data, the classification criteria are not met.

**Respiratory** : No respiratory sensitization studies have been conducted. There are no data to suggest that borates are respiratory sensitizers. Based on the available data, the classification criteria are not met.

## Section 11. Toxicological information

### Mutagenicity

| Product/ingredient name                  | Test                   | Experiment  | Result   |
|--|------------------------|---|----------|
| Pentaboron sodium octaoxide pentahydrate | (based on boric acid). | Experiment: In vitro<br>Subject: Mammalian-Animal<br>Cell: Germ | Negative |

**Conclusion/Summary** : Not mutagenic (based on boric acid). Based on the available data, the classification criteria are not met.

### Carcinogenicity

| Product/ingredient name | Result               | Species | Dose   | Exposure |
|-------------------------|----------------------|---------|--|----------|
| Boric acid              | Negative - Oral - TC | Mouse   | 446 to 1150 mg/<br>kg Boric acid /<br>body weight) | -        |

**Conclusion/Summary** : No evidence of carcinogenicity (based on boric acid). Based on the available data, the classification criteria are not met.

### Classification

| Product/ingredient name                  | OSHA  | IARC | NTP |
|--|-------|------|-----|
| Pentaboron sodium octaoxide pentahydrate | None. | -    | -   |

### Reproductive toxicity

| Product/ingredient name                  | Maternal toxicity | Fertility | Development toxin | Species | Dose   | Exposure                                |
|--|-------------------|-----------|-------------------|---------|--|---|
| Pentaboron sodium octaoxide pentahydrate | -                 | Positive  | -                 | Rat     | Oral: 0; 34 (5.9); 100 (17.5); and 336 (58.5) mg boric acid (mg B)/kg body weight/day; and 0; 50 (5.9); 155 (17.5); and 518 (58.5) mg borax (mg B)/kg body weight/day. | Oral feeding study                      |
|  | Negative          | Negative  | Negative          | Human   | Inhalation: A subset of workers was exposed to 125 mg B/day.   | Combined oral ingestion and inhalation. |
|  | Positive          | -         | Positive          | Rat     | Oral: 0; 19 (3.3); 36 (6.3);   | Oral feeding study                      |



## Section 11. Toxicological information

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  | 55 (9.6);<br>76 (13.3)<br>and 143<br>(25) mg<br>boric acid<br>(mg B)/kg<br>body<br>weight. |  |
|--|--|--|--|--|--|--|

**Conclusion/Summary** : Reprotoxicity studies have been conducted with boric acid and disodium tetraborate. A multigeneration study in the rat gave a NOAEL for fertility in males of 17.5 mg B/kg/day. Developmental effects have been observed in laboratory animals, the most sensitive species being the rat with a NOAEL of 9.6 mg B/kg bw/day. Boric acid and Disodium tetraborate are classified under the 1st ATP to CLP as Repr. 1B; H360FD. While boron has been shown to adversely affect male reproduction in laboratory animals, there was no clear evidence of male reproductive effects attributable to boron in studies of highly exposed workers. Following an evaluation based on weight of evidence, classification as Repr. Cat 2 is justified

### Teratogenicity

**Conclusion/Summary** : See Reproductive toxicity.

### Specific target organ toxicity (single exposure)

| Name  | Category | Route of exposure | Target organs |
|---|----------|-------------------|---------------|
| Based on the available data, the classification criteria are not met. |          |                   |               |

### Specific target organ toxicity (repeated exposure)

| Name  | Category | Route of exposure | Target organs |
|---|----------|-------------------|---------------|
| Based on the available data, the classification criteria are not met. |          |                   |               |

### Aspiration hazard

| Name                                     | Result  |
|--|---|
| Pentaboron sodium octaoxide pentahydrate | Physical form of solid powder indicates no aspiration hazard potential. |

**Information on the likely routes of exposure** : Inhalation is the most significant route of exposure in occupational and other settings. Dermal exposure is not usually a concern because product is poorly absorbed through intact skin. **Product is not intended for ingestion.**

### Potential acute health effects

**Eye contact** : No known significant effects or critical hazards.

**Inhalation** : No known significant effects or critical hazards.

**Skin contact** : Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.

**Ingestion** : This product is not intended for ingestion. Small amounts (e.g., a teaspoon) swallowed accidentally are not likely to cause effects; swallowing amounts larger than that may cause gastrointestinal symptoms. Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.

## Section 11. Toxicological information

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

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.
- Ingestion** : Symptoms of accidental over-exposure to high doses of inorganic borate salts have been associated with ingestion or absorption through large areas of severely damaged skin. These may include nausea, vomiting, and diarrhoea, with delayed effects of skin redness and peeling.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid and sodium borate dust. Human epidemiological studies indicate no effect on fertility in occupational populations with chronic exposures to borate dust and indicate no effect to a general population with high exposures to borates in the environment.

### Potential chronic health effects

| Product/ingredient name   | Result             | Species | Dose   | Exposure           |
|---|--------------------|---------|--|--------------------|
| Pentaboron sodium octaoxide pentahydrate (based on boric acid). | Chronic NOAEL Oral | Rat     | 17.5 mg/kg<br>0; 33 (5.9); 100 (17.5); 334 (58.5) mg boric acid (B)/kg bw per day (nominal in diet); and 0; 52 (5.9); 155 (17.5); 516 (58.5) mg borax (B)/kg/day (nominal in diet) | Oral feeding study |

- Conclusion/Summary** : A NOAEL of 17.5 mg B/kg body weight/day equivalent to 100 mg boric acid/kg body weight/day was determined in a chronic feeding study (2 years) in rats and is based on testes effects.

Human epidemiological studies show no increase in pulmonary disease in occupational populations with chronic exposures to boric acid and sodium borate dust. Human epidemiological studies indicate no effect on fertility in occupational populations with chronic exposures to borate dust and indicate no effect to a general population with high exposures to borates in the environment.

- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.

## Section 11. Toxicological information

**Reproductive toxicity** : Suspected of damaging fertility or the unborn child.

### Numerical measures of toxicity

#### Acute toxicity estimates

N/A

### Toxicokinetics

- Distribution** : Boric acid is distributed rapidly and evenly through the body, with concentrations in bone 2-3 higher than in other tissues.
- Metabolism** : In the blood boric acid is the main species present and is not further metabolised.
- Elimination** : Boric acid is excreted rapidly, with elimination half-lives of 1 h in the mouse, 3 h in the rat and <27.8 h in humans, and has low potential for accumulation. Boric acid is mainly excreted in the urine.

## Section 12. Ecological information

### Toxicity

| Product/ingredient name                  | Result                    | Species                                | Exposure              |
|--|---------------------------|--|-----------------------|
| Pentaboron sodium octaoxide pentahydrate | EC50 52.4 mg/l (as Boron) | <i>Pseudokirchneriella subcapitata</i> | Fresh water - Acute   |
|  | LC50 91 mg/l (as Boron)   | <i>Ceriodaphnia dubia</i>              | Fresh water - Acute   |
|  | LC50 79.7 mg/l (as Boron) | <i>Pimephales promelas</i>             | Fresh water - Acute   |
|  | NOEC 6.4 mg/l (as Boron)  | <i>Brachydanio rerio</i>               | Fresh water - Chronic |
|  | NOEC 14.2 mg/l (as Boron) | <i>Daphnia magna</i>                   | Fresh water - Chronic |
|  | NOEC 17.5 mg/l (as Boron) | <i>Pseudokirchneriella subcapitata</i> | Fresh water - Chronic |

**Conclusion/Summary** : Note that the data values are expressed as boron equivalents. To convert product into equivalent boron (B) content, multiply by 0.1832. Studies judged to be unreliable or with insufficient information to evaluate are not included.

Boron is an essential micronutrient for healthy growth of plants; however, it can be harmful to boron sensitive plants in high quantities. Care should be taken to minimize the amount of this product released to the environment.

### Persistence and degradability

**Conclusion/Summary** : Not applicable. Inorganic substance

### Bioaccumulative potential

## Section 12. Ecological information

| Product/ingredient name | LogP <sub>ow</sub> | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| Boric acid              | -1.09              | -   | low       |

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)**

: Not available.

**Mobility**

: The product is soluble in water and is leachable through normal soil. Adsorption to soils or sediments is insignificant.

### Other adverse effects

: No known significant effects or critical hazards.

## Section 13. Disposal considerations

### Disposal methods

: Waste packaging should be recycled. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

|                                   | DOT Classification | TDG Classification | Mexico Classification | IMDG           | IATA           |
|-----------------------------------|--------------------|--------------------|-----------------------|----------------|----------------|
| <b>UN number</b>                  | Not regulated.     | Not regulated.     | Not regulated.        | Not regulated. | Not regulated. |
| <b>UN proper shipping name</b>    | -                  | -                  | -                     | -              | -              |
| <b>Transport hazard class(es)</b> | -                  | -                  | -                     | -              | -              |
| <b>Packing group</b>              | -                  | -                  | -                     | -              | -              |
| <b>Environmental hazards</b>      | No.                | No.                | No.                   | No.            | No.            |

**Special precautions for user** : Not applicable.

**Transport in bulk according to IMO instruments** : Not applicable.

## Section 15. Regulatory information

**U.S. Federal regulations** : TSCA 8(a) CDR Exempt/Partial exemption: Not determined

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : TOXIC TO REPRODUCTION - Category 2

#### Composition/information on ingredients

No products were found.

### State regulations

**Massachusetts** : None of the components are listed.

**New York** : None of the components are listed.

**New Jersey** : None of the components are listed.

**Pennsylvania** : None of the components are listed.

### California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia** : All components are listed or exempted.

## Section 15. Regulatory information

|                          |  |
|--------------------------|--|
| <b>China</b>             | : All components are listed or exempted.   |
| <b>Europe</b>            | : All components are listed or exempted.   |
| <b>Japan</b>             | : <b>Japan inventory (CSCL):</b> Not determined.<br><b>Japan inventory (ISHL):</b> Not determined. |
| <b>New Zealand</b>       | : All components are listed or exempted.   |
| <b>Philippines</b>       | : All components are listed or exempted.   |
| <b>Republic of Korea</b> | : All components are listed or exempted.   |
| <b>Taiwan</b>            | : All components are listed or exempted.   |
| <b>Thailand</b>          | : Not determined.  |
| <b>Turkey</b>            | : Not determined.  |
| <b>United States</b>     | : 12007-92-0   |
| <b>Viet Nam</b>          | : Not determined.  |
| <b>Canada</b>            |  |
| <b>WHMIS (Canada)</b>    | : TOXIC TO REPRODUCTION - Category 2   |
| <b>Canadian NPRI</b>     | : None of the components are listed.   |

## Section 16. Other information

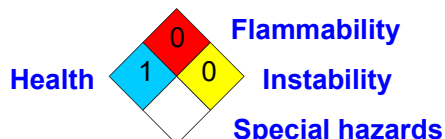
### Hazardous Material Information System (U.S.A.)

|                  |   |   |
|------------------|---|---|
| Health           | * | 0 |
| Flammability     |   | 0 |
| Physical hazards |   | 0 |
|                  |   |   |

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### National Fire Protection Association (U.S.A.)



### Procedure used to derive the classification

| Classification                     | Justification   |
|------------------------------------|-----------------|
| TOXIC TO REPRODUCTION - Category 2 | Expert judgment |

### History

|                                       |              |
|---------------------------------------|--------------|
| <b>Date of issue/Date of revision</b> | : 04/05/2022 |
| <b>Date of previous issue</b>         | : 29/04/2022 |
| <b>Version</b>                        | : 1.01       |

## Section 16. Other information

### Key to abbreviations

- : ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- IMSBC = International Maritime Solid Bulk Cargoes Code
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- UN = United Nations

### References

- : For general information on the toxicology of borates see Patty's Toxicology, 6th Edition Vol. I, (2012) Chap. 23, 'Boron'.

▣ Indicates information that has changed from previously issued version.

United States / 4.12 / EN-US

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.