# Safety Data Sheet

**Issue date** 21-Sep-2018 **Revision date** 21-Sep-2018 **Revision Number** 1

## 1. IDENTIFICATION

### Product identification

| | |
|---|---|
| Product identifier | Falcon Tools® Resin Fiber Disc |
| Other means of identification | FA4066 |
| Recommended use | Abrasive |
| Restrictions on use | For industrial use only |

### Supplier

Corporate Headquarters:
Lawson Products, Inc.
8770 W. Bryn Mawr Ave., Suite 900
Chicago, IL 60631
(866) 837-9908

Canadian Distribution Center:
Lawson Canada
7315 Rapistan Court
Mississauga, ON L5N 5Z4
(800) 323-5922

**24 Hour Emergency Phone Number** (888) 426-4851 (Prosar)

## 2. HAZARD(S) IDENTIFICATION

**Hazard Classification** While this material is not classified as hazardous under OSHA regulations, this SDS contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

**Symbol** Not applicable

**Signal word** Not applicable

**Hazard statements** Not applicable

**Precautionary statements**

**Response** Not applicable

**Storage** Not applicable

**Disposal** Not applicable

**Hazard(s) Not Otherwise Classified (HNOC)** Non-hazardous as sold. Handling or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose, and throat. Exposure to dust generated from processing the base material or coatings may present additional health hazards. A greater risk is likely from the materials being worked on, paints, coatings, etc.

Therefore an assessement of the substances being abraded by the product is essential, prior to use.

**Physical Hazards Not Otherwise Classified (PHNOC)** Not applicable.

**Unknown acute toxicity** None known

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixtures:** The formulation given is for the abrasive cloth, fully cured resins and adhesives used for abrasive product backing, flap disc bottom plate and the rein fiber discs.

**Composition** This product is classified as an "article" according to Title 29 of the Code of Federal Regulations, OSHA Part 1910.1200. "Article means a manufactured item other than a fluid or particle, which is formed to a specific shape or design during manufacture which has end use function dependent in whole or in part upon its shape or design during end use, and which under normal conditions of use does not release more than very small quantities or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.".

| Chemical name | CAS-No | Weight % |
|---|---|---|
| Borosilicate Glass | 65997-17-3 | 50-80 |
| Vulcanized Fiber | N/A | 45-70 |
| Alumina Zirconia | 68995-26-0 | 0-60 |
| Resin | N/A | 0-40 |
| Bisphenol A - Epichlorohydrin polymer | 25068-38-6 | 0-40 |
| Aluminum Oxide | 1344-28-1 | 0-60 |
| Silicon Carbide | 409-21-2 | 0-60 |
| Limestone | 1317-65-3 | 0-35 |
| Bisphenol F Epoxy Resin | 28064-14-4 | 0-25 |
| Ziroconium Oxide | 1314-23-4 | 0-40 |
| Zirconium | 7440-67-7 | 0-20 |
| Garnet | 12178-41-5 | 0-30 |
| Cryolite | 13775-53-6 | 0-35 |
| Potassium Fluoroborate | 14075-53-7 | 0-15 |
| Kaolinite, Hydrous Aluminum Silicate | 1332-58-7 | 0-15 |
| Fluoride | 16984-48-8 | 0-15 |
| Tetraethylenepentamine | 112-57-2 | 0-10 |
| Calcium stearate | 1592-23-0 | 0-10 |
| Zinc stearate | 557-05-1 | 0-10 |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | 13775-53-6 | 0-9 |
| Natural Wax | N/A | 0-5 |
| Ethylene glycol | 107-21-1 | 0-5 |
| Calcium Sulfate | 7778-18-9 | 0-5 |
| Black Iron Oxide | 1317-61-9 | 0-5 |
| 1,6-(bis(2,3-epoxypropoxy)hexane | 16096-31-4 | 0-2.5 |
| Titanium Dioxide | 13463-67-7 | 0-1.5 |
| Crystalline Silica | 14808-60-7 | 0-1 |

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

## 4. FIRST-AID MEASURES

### Necessary first-aid measures

**Inhalation** Remove from exposure. If symptoms persist, get medical attention.

**Ingestion** Not likely, due to the form of the product. If necessary, call a poison center or physician.

**Skin contact** None known based on information supplied.

**Eye contact** Remove from exposure. Irrigate (flood) eyes immediately and repeatedly with clean water. If eye irritation persists: Get medical advice/attention.

**Most important symptoms (acute)** None known.

**Most important symptoms (over-exposure)** None known.

**Indication of any immediate medical attention and special treatment needed** Not applicable. Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media** Sand. Extinguishing powder. Dry Chemical, Carbon Dioxide, Foam or Water Fog. Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** None known.

**Specific hazards** May generate toxic metal fumes when heated. If ventilation is not adequate, use respiratory protection equipment.

**Special protective equipment for fire-fighters** Use extinguishing media appropriate to surrounding fire.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures** Follow instructions of grinding machine manufacturers and the relevant national regulations. Standard safety precautions should be observed when handling this material.

**Methods and materials for containment and cleaning up** Not applicable.

## 7. HANDLING AND STORAGE

**Precautions for safe handling** Follow instructions of grinding machine manufacturers and the relevant national regulations.

**Conditions for safe storage, including any incompatibilities** Observe the safety recommendations of the manufacturer. Store at room temperature. Avoid excessive temperatures in storage. The expected shelf life of abrasives is not to exceed 2 years, unless otherwise specified.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

| Chemical name | OSHA PEL (TWA) | ACGIH OEL (TWA) | NIOSH - TWA |
|---|---|---|---|
| Borosilicate Glass | - | 1 fiber/cm3 TWA<br>5 mg/m³ TWA | - |
| Vulcanized Fiber | - | - | - |
| Alumina Zirconia | - | - | - |

| Chemical name | OSHA PEL (TWA) | ACGIH OEL (TWA) | NIOSH - TWA |
|---|---|---|---|
| Resin | - | - | - |
| Bisphenol A - Epichlorohydrin polymer | - | - | - |
| Aluminum Oxide | 15 mg/m³ TWA<br>5 mg/m³ TWA | 1 mg/m³ TWA | - |
| Silicon Carbide | 15 mg/m³ TWA<br>5 mg/m³ TWA | 10 mg/m³ TWA<br>3 mg/m³ TWA<br>0.1 fiber/cm3 TWA | 10 mg/m³ TWA<br>5 mg/m³ TWA |
| Limestone | 15 mg/m³ TWA<br>5 mg/m³ TWA | - | 10 mg/m³ TWA<br>5 mg/m³ TWA |
| Bisphenol F Epoxy Resin | - | - | - |
| Ziroconium Oxide | 5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA |
| Zirconium | 5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA 5 mg/m³ TWA |
| Garnet | - | - | - |
| Cryolite | - | - | - |
| Potassium Fluoroborate | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA |
| Kaolinite, Hydrous Aluminum Silicate | 15 mg/m³ TWA<br>5 mg/m³ TWA | 2 mg/m³ TWA | 10 mg/m³ TWA<br>5 mg/m³ TWA |
| Fluoride | 0.1 ppm TWA<br>0.2 mg/m³ TWA 2.5 mg/m³ TWA | 2 ppm STEL<br>1 ppm TWA 2.5 mg/m³ TWA | 0.1 ppm TWA<br>0.2 mg/m³ TWA 2.5 mg/m³ TWA |
| Tetraethylenepentamine | - | - | - |
| Calcium stearate | - | 10 mg/m³ TWA<br>3 mg/m³ TWA | - |
| Zinc stearate | 15 mg/m³ TWA<br>5 mg/m³ TWA | 10 mg/m³ TWA<br>3 mg/m³ TWA | 10 mg/m³ TWA<br>5 mg/m³ TWA |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | - | - | - |
| Natural Wax | - | - | - |
| Ethylene glycol | - | 50 ppm STEL<br>10 mg/m³ STEL<br>25 ppm TWA | - |
| Calcium Sulfate | 15 mg/m³ TWA<br>5 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA<br>5 mg/m³ TWA |
| Black Iron Oxide | - | - | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | - | - | - |
| Titanium Dioxide | 15 mg/m³ TWA | 10 mg/m³ TWA | - |
| Crystalline Silica | 50 µg/m³ TWA 50 µg/m³ TWA | 0.025 mg/m³ TWA | 0.05 mg/m³ TWA |

**Appropriate engineering controls**

General limitations of particulate air concentrations have to be considered in risk assessment. Use a properly fitted, air-purifying or supplied air respirator complying with a approved standard if a risk assessment indicates this is necessary. Dust formation may be relevant in the processing of this product. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Ensure all national/local regulations are observed.

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

**Eye protection** Goggles. Face shield is recommended.

**Hearing Protection** Use hearing protection if operations are noisy. Hearing protection such as earplugs or approved earmuffs. Refer to OSHA 29 CFR 1910.95.

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

**Respiratory protection** Use a NIOSH/MSHA approved respirator in dusty environments.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

**Canadian Province Occupational**

## Exposure Limits

| Chemical name | Alberta OEL | British Columbia OEL | Manitoba OEL | New Brunswick - OEL | Newfoundland & Labrador - OEL | Nova Scotia - OEL | Ontario OEL | Prince Edward Island - OEL | Quebec OEL | Saskatchewan - OEL |
|---|---|---|---|---|---|---|---|---|---|---|
| Borosilicate Glass | 5 mg/m³ TWA<br>1 fibre/cm3 TWA | 1 fibre/cm3 TWA<br>5 mg/m³ TWA | 1 fiber/cm3 TWA<br>5 mg/m³ TWA | 5 mg/m³ TWA<br>1 fibre/cm3 TWA | 1 fiber/cm3 TWA<br>5 mg/m³ TWA | 1 fiber/cm3 TWA<br>5 mg/m³ TWA | 1 fibre/cm3 TWA<br>5 mg/m³ TWA | 1 fiber/cm3 TWA<br>5 mg/m³ TWA | 10 mg/m³ TWAEV | 3 fibre/cm3 STEL<br>10 mg/m³ STEL<br>5 mg/m³ TWA<br>1 fibre/cm3 TWA |
| Vulcanized Fiber | - | - | - | - | - | - | - | - | - | - |
| Alumina Zirconia | - | - | - | - | - | - | - | - | - | - |
| Resin | - | - | - | - | - | - | - | - | - | - |
| Bisphenol A - Epichlorohydrin polymer | - | - | - | - | - | - | - | - | - | - |
| Aluminum Oxide | 10 mg/m³ TWA | 1.0 mg/m³ TWA | 1 mg/m³ TWA | 10 mg/m³ TWA | 1 mg/m³ TWA | 1 mg/m³ TWA | 1 mg/m³ TWA | 1 mg/m³ TWA | 10 mg/m³ TWAEV | 20 mg/m³ STEL<br>10 mg/m³ TWA |
| Silicon Carbide | 10 mg/m³ TWA<br>3 mg/m³ TWA<br>0.1 fibre/cm3 TWA | 10 mg/m³ TWA<br>3 mg/m³ TWA<br>0.1 fibre/cm3 TWA | 10 mg/m³ TWA<br>3 mg/m³ TWA<br>0.1 fiber/cm3 TWA | 10 mg/m³ TWA | 10 mg/m³ TWA<br>3 mg/m³ TWA<br>0.1 fiber/cm3 TWA | 10 mg/m³ TWA<br>3 mg/m³ TWA<br>0.1 fiber/cm3 TWA | 10 mg/m³ TWA<br>3 mg/m³ TWA<br>0.1 fibre/cm3 TWA | 10 mg/m³ TWA<br>3 mg/m³ TWA<br>0.1 fiber/cm3 TWA | 10 mg/m³ TWAEV | 20 mg/m³ STEL<br>6 mg/m³ STEL<br>0.1 fibre/cm3 TWA<br>10 mg/m³ TWA<br>3 mg/m³ TWA |
| Limestone | 10 mg/m³ TWA | 20 mg/m³ STEL<br>10 mg/m³ TWA<br>3 mg/m³ TWA | - | 10 mg/m³ TWA | - | - | - | - | 10 mg/m³ TWAEV | 20 mg/m³ STEL<br>10 mg/m³ TWA |
| Bisphenol F Epoxy Resin | - | - | - | - | - | - | - | - | - | - |
| Ziroconium Oxide | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA | 5 mg/m³ TWA<br>10 mg/m³ STEL | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEV<br>5 mg/m³ TWAEV | 10 mg/m³ STEL<br>5 mg/m³ TWA |
| Zirconium | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA 5 mg/m³ TWA | 5 mg/m³ TWA<br>10 mg/m³ STEL | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA 5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA 5 mg/m³ TWA | 10 mg/m³ STEL<br>5 mg/m³ TWA 5 mg/m³ TWA | 10 mg/m³ STEV<br>5 mg/m³ TWAEV 5 mg/m³ TWAEV | 10 mg/m³ STEL<br>5 mg/m³ TWA 5 mg/m³ TWA |
| Garnet | - | - | - | - | - | - | - | - | - | - |
| Cryolite | - | - | - | - | - | - | - | - | - | - |
| Potassium Fluoroborate | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA | 2.5 mg/m³ TWA | 2.5 mg/m³ TWAEV | 5 mg/m³ STEL<br>2.5 mg/m³ TWA |
| Kaolinite, Hydrous Aluminum Silicate | 2 mg/m³ TWA | 2 mg/m³ TWA | 2 mg/m³ TWA | 2 mg/m³ TWA | 2 mg/m³ TWA | 2 mg/m³ TWA | 2 mg/m³ TWA | 2 mg/m³ TWA | 5 mg/m³ TWAEV | 4 mg/m³ STEL<br>2 mg/m³ TWA |
| Fluoride | 2 ppm STEL<br>3.1 mg/m³ STEL<br>1 ppm TWA | 0.1 ppm TWA 2.5 mg/m³ TWA | 1 ppm TWA<br>2.5 mg/m³ TWA<br>2 ppm STEL | 2 ppm STEL<br>3.1 mg/m³ STEL<br>1 ppm TWA | 2 ppm STEL<br>1 ppm TWA<br>2.5 mg/m³ TWA | 2 ppm STEL<br>1 ppm TWA<br>2.5 mg/m³ TWA | 2 ppm STEL<br>1 ppm TWA<br>2.5 mg/m³ TWA | 2 ppm STEL<br>1 ppm TWA<br>2.5 mg/m³ TWA | 0.1 ppm TWAEV<br>0.2 mg/m³ TWAEV 2.5 mg/m³ | 2 ppm STEL 5 mg/m³ STEL<br>1 ppm TWA |

| Chemical name | Alberta OEL | British Columbia OEL | Manitoba OEL | New Brunswick - OEL | Newfoundland & Labrador - OEL | Nova Scotia - OEL | Ontario OEL | Prince Edward Island - OEL | Quebec OEL | Saskatchewan - OEL |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1.6 mg/m³ TWA 2.5 mg/m³ TWA | | | 1.6 mg/m³ TWA 2.5 mg/m³ TWA | | | | | TWAEV | 2.5 mg/m³ TWA |
| Tetraethylenepentamine | - | - | - | - | - | - | - | - | - | - |
| Calcium stearate | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA | - | 20 mg/m³ STEL 10 mg/m³ TWA |
| Zinc stearate | 10 mg/m³ TWA | 20 mg/m³ STEL 10 mg/m³ TWA 3 mg/m³ TWA 10 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA 10 mg/m³ TWA 3 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA 10 mg/m³ TWA 3 mg/m³ TWA | 10 mg/m³ TWAEV | 20 mg/m³ STEL 10 mg/m³ TWA |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | - | - | - | - | - | - | - | - | - | - |
| Natural Wax | - | - | - | - | - | - | - | - | - | - |
| Ethylene glycol | 100 mg/m³ Ceiling | 100 mg/m³ Ceiling 50 ppm Ceiling 20 mg/m³ STEL 10 mg/m³ TWA | 25 ppm TWA 50 ppm STEL 10 mg/m³ STEL | 100 mg/m³ Ceiling | 50 ppm STEL 10 mg/m³ STEL 25 ppm TWA | 50 ppm STEL 10 mg/m³ STEL 25 ppm TWA | 100 mg/m³ Ceiling | 50 ppm STEL 10 mg/m³ STEL 25 ppm TWA | 50 ppm Ceiling 127 mg/m³ Ceiling | 100 mg/m³ Ceiling |
| Calcium Sulfate | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWAEV 5 mg/m³ TWAEV | 20 mg/m³ STEL 10 mg/m³ TWA |
| Black Iron Oxide | - | - | - | - | - | - | - | - | - | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | - | - | - | - | - | - | - | - | - | - |
| Titanium Dioxide | 10 mg/m³ TWA | 10 mg/m³ TWA 3 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWA | 10 mg/m³ TWAEV | 20 mg/m³ STEL 10 mg/m³ TWA |
| Crystalline Silica | 0.025 mg/m³ TWA | 0.025 mg/m³ TWA | 0.025 mg/m³ TWA | 0.1 mg/m³ TWA | 0.025 mg/m³ TWA | 0.025 mg/m³ TWA | 0.10 mg/m³ TWA | 0.025 mg/m³ TWA | 0.1 mg/m³ TWAEV | 0.05 mg/m³ TWA |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state** Solid

**Color** Various

**Odor** Not applicable

**Odor threshold** Not applicable

**pH** Not applicable

**Melting point/range °C** Not applicable

**Melting point/range °F** Not applicable

**Boiling point/range °C** Not applicable

| | |
|---|---|
| **Boiling point/range °F** | Not applicable |
| **Flash point °C / °F** | Not applicable |
| **Evaporation rate** | Not applicable |
| **Flammability (Solid, Gas)** | Not applicable |
| **Lower explosion limit** | Not applicable |
| **Upper explosion limit** | Not applicable |
| **Vapor pressure** | Not applicable |
| **Vapor density** | Not applicable |
| **Relative density** | Not applicable |
| **Solubility** | Not applicable |
| **Partition coefficient (n-octanol/water)** | Not applicable |
| **Autoignition temperature °C** | Not applicable |
| **Autoignition temperature °F** | Not applicable |
| **Decomposition temperature °C** | > 250 °C |
| **Decomposition temperature °F** | > 482 °F |
| **Viscosity** | Not applicable |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **Reactivity** | No dangerous reactions under normal conditions of use. |
| **Chemical stability** | Stable under normal conditions. |
| **Possibility of hazardous reactions** | None under normal conditions of use. |
| **Conditions to avoid** | No specific data. |
| **Incompatible materials** | Oxidizing agents. Strong acids. Bases. |
| **Hazardous decomposition products** | Temperatures above 480F. Toxic gases or fumes are given off during burning or thermal decomposition. |

## 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| **Information on likely routes of exposure** | Not available. |
| **Symptoms** | Product may present a nuisance dust hazard. May cause irritation of the respiratory system. Dust may cause abrasion. Skin irritation. Dust from this product may cause eye irritation. Eye contact may cause mechanical irritation. |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure** Prolonged inhalation of titanium dioxide above safe exposure limits can cause cancer.

**Numerical measures of toxicity**

| Chemical name | Inhalation LC50: | Dermal LD50: | Oral LD50: |
|---|---|---|---|
| Borosilicate Glass | - | - | - |
| Vulcanized Fiber | - | - | - |
| Alumina Zirconia | - | - | - |
| Resin | - | - | - |
| Bisphenol A - Epichlorohydrin polymer | - | - | = 11400 mg/kg ( Rat ) |
| Aluminum Oxide | - | - | > 5000 mg/kg ( Rat ) |
| Silicon Carbide | - | - | - |
| Limestone | - | - | - |
| Bisphenol F Epoxy Resin | - | - | - |
| Ziroconium Oxide | - | - | - |
| Zirconium | - | - | - |
| Garnet | - | - | - |
| Cryolite | = 4470 µg/L ( Rat ) 4 h | > 2100 mg/kg ( Rabbit ) Dermal LD50 Rabbit >2100 mg/kg (Source: EU_RAR) | > 5 g/kg ( Rat ) Oral LD50 Rat >5 g/kg (no deaths occurred, Source: NLM_CIP) |
| Potassium Fluoroborate | - | - | = 5854 mg/kg ( Rat ) |
| Kaolinite, Hydrous Aluminum Silicate | - | > 5000 mg/kg ( Rat ) | > 5000 mg/kg ( Rat ) |
| Fluoride | = 185 ppm ( Rat ) 1 h | - | - |
| Tetraethylenepentamine | - | = 660 µL/kg ( Rabbit ) | = 3990 mg/kg ( Rat ) |
| Calcium stearate | - | - | > 10 g/kg ( Rat ) |
| Zinc stearate | > 200 mg/L ( Rat ) 1 h | > 2000 mg/kg ( Rabbit ) Dermal LD50 Rabbit >2000 mg/kg (Source: EU_RAR) | > 10 g/kg ( Rat ) Oral LD50 Rat >10 g/kg (Source: NLM_CIP) |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | - | > 2100 mg/kg ( Rabbit ) | > 5 g/kg ( Rat ) |
| Natural Wax | - | - | - |
| Ethylene glycol | - | = 10600 mg/kg ( Rat ) = 9530 µL/kg ( Rabbit ) | = 4700 mg/kg ( Rat ) |
| Calcium Sulfate | - | - | > 3000 mg/kg ( Rat ) Oral LD50 Rat >3000 mg/kg (Source: IUCLID) |
| Black Iron Oxide | - | - | > 10000 mg/kg ( Rat ) |
| 1,6-(bis(2,3-epoxypropoxy)hexane | - | - | 300 - 2000 mg/kg ( Rat ) Oral LD50 Rat 300 - 2000 mg/kg (miscible in olive oil; females; no deaths occurred at 300 mg/kg; death occurred (2 out of 3 tested female animals at 2000 mg/kg), Source: JP_J-CHECK) |
| Titanium Dioxide | - | - | > 10000 mg/kg ( Rat ) |
| Crystalline Silica | - | - | - |

**ATEmix (dermal)** Not available

**ATEmix (oral)** Not available

**ATEmix (inhalation-gas)** Not available

**ATEmix (inhalation-vapor)** Not available

**ATEmix (inhalation-dust/mist)** Not available

### Carcinogenicity

| Chemical name | ACGIH OEL - Carcinogens | IARC | OSHA RTK Carcinogens | NTP |
|---|---|---|---|---|
| Borosilicate Glass | A4 | Group 3 | - | - |
| Vulcanized Fiber | - | - | - | - |
| Alumina Zirconia | - | - | - | - |
| Resin | - | - | - | - |
| Bisphenol A - Epichlorohydrin polymer | - | - | - | - |
| Aluminum Oxide | A4 | - | - | - |
| Silicon Carbide | A2 | Group 2A | Listed | - |
| Limestone | - | - | - | - |
| Bisphenol F Epoxy Resin | - | - | - | - |
| Ziroconium Oxide | A4 | - | - | - |
| Zirconium | A4 | - | - | - |
| Garnet | - | - | - | - |
| Cryolite | - | - | - | - |
| Potassium Fluoroborate | A4 | Group 3 | - | - |
| Kaolinite, Hydrous Aluminum Silicate | A4 | - | - | - |
| Fluoride | - | Group 3 | - | - |
| Tetraethylenepentamine | - | - | - | - |
| Calcium stearate | A4 | - | - | - |
| Zinc stearate | - | - | - | - |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | - | - | - | - |
| Natural Wax | - | - | - | - |
| Ethylene glycol | A4 | - | - | - |
| Calcium Sulfate | - | - | - | - |
| Black Iron Oxide | - | - | - | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | - | - | - | - |
| Titanium Dioxide | A4 | Group 2B | Listed | - |
| Crystalline Silica | A2 | Group 1 | Listed | Known |

### Canadian Province carcinogenicity limits

| Chemical name | Alberta - Carcinogen | British Columbia - Carcinogen | Manitoba - Carcinogen | New Brunswick - Carcinogen | Nova Scotia - Carcinogen | Quebec - Carcinogen |
|---|---|---|---|---|---|---|
| Borosilicate Glass | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Vulcanized Fiber | - | - | - | - | - | - |
| Alumina Zirconia | - | - | - | - | - | - |
| Resin | - | - | - | - | - | - |
| Bisphenol A - Epichlorohydrin polymer | - | - | - | - | - | - |
| Aluminum Oxide | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Silicon Carbide | A2 - Suspected Human Carcinogen (fibrous, including whiskers) | ACGIH A2 | ACGIH A2 | ACGIH A4 | ACGIH A2 | - |
| Limestone | - | - | - | - | - | - |
| Bisphenol F Epoxy Resin | - | - | - | - | - | - |

| Chemical name | Alberta - Carcinogen | British Columbia - Carcinogen | Manitoba - Carcinogen | New Brunswick - Carcinogen | Nova Scotia - Carcinogen | Quebec - Carcinogen |
|---|---|---|---|---|---|---|
| Ziroconium Oxide | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Zirconium | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Garnet | - | - | - | - | - | - |
| Cryolite | - | - | - | - | - | - |
| Potassium Fluoroborate | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Kaolinite, Hydrous Aluminum Silicate | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Fluoride | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Tetraethylenepentamine | - | - | - | - | - | - |
| Calcium stearate | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Zinc stearate | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | - | - | - | - | - | - |
| Natural Wax | - | - | - | - | - | - |
| Ethylene glycol | - | - | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Calcium Sulfate | - | - | - | - | - | - |
| Black Iron Oxide | - | - | - | - | - | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | - | - | - | - | - | - |
| Titanium Dioxide | - | IARC 2B | ACGIH A4 | ACGIH A4 | ACGIH A4 | - |
| Crystalline Silica | A2 - Suspected Human Carcinogen | ACGIH A2 IARC 1 | ACGIH A2 | - | ACGIH A2 | C2 carcinogen |

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

| Chemical name | Algae/aquatic plants | Fish |
|---|---|---|
| Borosilicate Glass | - | - |
| Vulcanized Fiber | - | - |
| Alumina Zirconia | - | - |
| Resin | - | - |
| Bisphenol A - Epichlorohydrin polymer | - | - |
| Aluminum Oxide | - | - |
| Silicon Carbide | - | - |
| Limestone | - | - |
| Bisphenol F Epoxy Resin | - | - |
| Ziroconium Oxide | - | - |
| Zirconium | - | - |
| Garnet | - | - |
| Cryolite | - | - |
| Potassium Fluoroborate | 95: 96 h Desmodesmus subspicatus mg/L EC50 | - |
| Kaolinite, Hydrous Aluminum Silicate | - | - |
| Fluoride | - | - |
| Tetraethylenepentamine | 2.1: 72 h Pseudokirchneriella subcapitata mg/L EC50 | 420: 96 h Poecilia reticulata mg/L LC50 static |
| Calcium stearate | - | - |
| Zinc stearate | - | - |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | - | - |

| Chemical name | Algae/aquatic plants | Fish |
|---|---|---|
| Natural Wax | - | - |
| Ethylene glycol | 6500 - 13000: 96 h Pseudokirchneriella subcapitata mg/L EC50 | 41000: 96 h Oncorhynchus mykiss mg/L LC50 14 - 18: 96 h Oncorhynchus mykiss mL/L LC50 static 16000: 96 h Poecilia reticulata mg/L LC50 static 40761: 96 h Oncorhynchus mykiss mg/L LC50 static 27540: 96 h Lepomis macrochirus mg/L LC50 static 40000 - 60000: 96 h Pimephales promelas mg/L LC50 static |
| Calcium Sulfate | - | 2980: 96 h Lepomis macrochirus mg/L LC50 static 1970: 96 h Pimephales promelas mg/L LC50 static |
| Black Iron Oxide | - | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | - | - |
| Titanium Dioxide | - | - |
| Crystalline Silica | - | - |

**Persistence and degradability** No data available.

**Bioaccumulation**

| Chemical name | CAS-No | Partition coefficient (log Kow) |
|---|---|---|
| Borosilicate Glass 65997-17-3 | 65997-17-3 | - |
| Vulcanized Fiber N/A | N/A | - |
| Alumina Zirconia 68995-26-0 | 68995-26-0 | - |
| Resin N/A | N/A | - |
| Bisphenol A - Epichlorohydrin polymer 25068-38-6 | 25068-38-6 | - |
| Aluminum Oxide 1344-28-1 | 1344-28-1 | - |
| Silicon Carbide 409-21-2 | 409-21-2 | - |
| Limestone 1317-65-3 | 1317-65-3 | - |
| Bisphenol F Epoxy Resin 28064-14-4 | 28064-14-4 | - |
| Ziroconium Oxide 1314-23-4 | 1314-23-4 | - |
| Zirconium 7440-67-7 | 7440-67-7 | - |
| Garnet 12178-41-5 | 12178-41-5 | - |
| Cryolite 13775-53-6 | 13775-53-6 | - |
| Potassium Fluoroborate 14075-53-7 | 14075-53-7 | - |
| Kaolinite, Hydrous Aluminum Silicate 1332-58-7 | 1332-58-7 | - |
| Fluoride 16984-48-8 | 16984-48-8 | - |
| Tetraethylenepentamine 112-57-2 | 112-57-2 | <1 |
| Calcium stearate 1592-23-0 | 1592-23-0 | - |

| Chemical name | CAS-No | Partition coefficient (log Kow) |
|---|---|---|
| Zinc stearate<br>557-05-1 | 557-05-1 | 1.2 |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)-<br>13775-53-6 | 13775-53-6 | - |
| Natural Wax<br>N/A | N/A | - |
| Ethylene glycol<br>107-21-1 | 107-21-1 | -1.93 |
| Calcium Sulfate<br>7778-18-9 | 7778-18-9 | - |
| Black Iron Oxide<br>1317-61-9 | 1317-61-9 | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane<br>16096-31-4 | 16096-31-4 | - |
| Titanium Dioxide<br>13463-67-7 | 13463-67-7 | - |
| Crystalline Silica<br>14808-60-7 | 14808-60-7 | - |

**Mobility in soil** Not available.

**Other adverse effects** None known

## 13. DISPOSAL CONSIDERATIONS

**Disposal information** Discard container or liner in accordance with federal, state, and local regulations.

**Contaminated packaging** Dispose in accordance with local, state and federal regulations.

## 14. TRANSPORTATION INFORMATION

**Shipping Descriptions**

**DOT**
**Proper shipping name** Not regulated

**TDG**
**Proper shipping name** Not regulated

**IATA**
**Proper shipping name** Not regulated

**IMDG/IMO**
**Proper shipping name** Not regulated

**Marine Pollutants**

| Chemical name | CAS-No | USDOT Marine Pollutant | Canada TDG Marine Pollutant | IMDG Marine Pollutant |
|---|---|---|---|---|
| Borosilicate Glass | 65997-17-3 | - | - | - |
| Vulcanized Fiber | N/A | - | - | - |
| Alumina Zirconia | 68995-26-0 | - | - | - |
| Resin | N/A | - | - | - |
| Bisphenol A - Epichlorohydrin polymer | 25068-38-6 | - | - | - |
| Aluminum Oxide | 1344-28-1 | - | - | - |
| Silicon Carbide | 409-21-2 | - | - | - |
| Limestone | 1317-65-3 | - | - | - |

| Chemical name | CAS-No | USDOT Marine Pollutant | Canada TDG Marine Pollutant | IMDG Marine Pollutant |
|---|---|---|---|---|
| Bisphenol F Epoxy Resin | 28064-14-4 | - | - | - |
| Ziroconium Oxide | 1314-23-4 | - | - | - |
| Zirconium | 7440-67-7 | - | - | - |
| Garnet | 12178-41-5 | - | - | - |
| Cryolite | 13775-53-6 | - | - | - |
| Potassium Fluoroborate | 14075-53-7 | - | - | - |
| Kaolinite, Hydrous Aluminum Silicate | 1332-58-7 | - | - | - |
| Fluoride | 16984-48-8 | - | - | - |
| Tetraethylenepentamine | 112-57-2 | - | - | - |
| Calcium stearate | 1592-23-0 | - | - | - |
| Zinc stearate | 557-05-1 | - | - | - |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | 13775-53-6 | - | - | - |
| Natural Wax | N/A | - | - | - |
| Ethylene glycol | 107-21-1 | - | - | - |
| Calcium Sulfate | 7778-18-9 | - | - | - |
| Black Iron Oxide | 1317-61-9 | - | - | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | 16096-31-4 | - | - | - |
| Titanium Dioxide | 13463-67-7 | - | - | - |
| Crystalline Silica | 14808-60-7 | - | - | - |

## 15. REGULATORY INFORMATION

### State regulations

#### U.S. state Right-to-Know regulations

| Chemical name | CAS-No | Massachusetts - RTK | New Jersey - RTK | Pennsylvania - RTK |
|---|---|---|---|---|
| Borosilicate Glass | 65997-17-3 | - | - | - |
| Vulcanized Fiber | N/A | - | - | - |
| Alumina Zirconia | 68995-26-0 | - | - | - |
| Resin | N/A | - | - | - |
| Bisphenol A - Epichlorohydrin polymer | 25068-38-6 | - | - | - |
| Aluminum Oxide | 1344-28-1 | X | X | X |
| Silicon Carbide | 409-21-2 | X | X | X |
| Limestone | 1317-65-3 | X | X | X |
| Bisphenol F Epoxy Resin | 28064-14-4 | - | - | - |
| Ziroconium Oxide | 1314-23-4 | X | - | - |
| Zirconium | 7440-67-7 | X | X | X |
| Garnet | 12178-41-5 | - | - | - |
| Cryolite | 13775-53-6 | - | - | - |
| Potassium Fluoroborate | 14075-53-7 | - | X | - |
| Kaolinite, Hydrous Aluminum Silicate | 1332-58-7 | X | X | X |
| Fluoride | 16984-48-8 | X | X | X |
| Tetraethylenepentamine | 112-57-2 | X | X | X |
| Calcium stearate | 1592-23-0 | - | - | - |
| Zinc stearate | 557-05-1 | X | X | X |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | 13775-53-6 | - | - | - |
| Natural Wax | N/A | - | - | - |
| Ethylene glycol | 107-21-1 | X | X | X |
| Calcium Sulfate | 7778-18-9 | X | X | X |
| Black Iron Oxide | 1317-61-9 | - | - | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | 16096-31-4 | - | - | - |

| Chemical name | CAS-No | Massachusetts - RTK | New Jersey - RTK | Pennsylvania - RTK |
|---|---|---|---|---|
| Titanium Dioxide | 13463-67-7 | X | X | X |
| Crystalline Silica | 14808-60-7 | X | X | X |

**California Prop. 65**

WARNING: This product contains a chemical(s) known to the state of California to cause cancer, birth defects or other reproductive harm

| Chemical name | CAS-No | California Prop. 65 |
|---|---|---|
| Borosilicate Glass | 65997-17-3 | - |
| Vulcanized Fiber | N/A | - |
| Alumina Zirconia | 68995-26-0 | - |
| Resin | N/A | - |
| Bisphenol A - Epichlorohydrin polymer | 25068-38-6 | Carcinogen |
| Aluminum Oxide | 1344-28-1 | - |
| Silicon Carbide | 409-21-2 | - |
| Limestone | 1317-65-3 | - |
| Bisphenol F Epoxy Resin | 28064-14-4 | - |
| Ziroconium Oxide | 1314-23-4 | - |
| Zirconium | 7440-67-7 | - |
| Garnet | 12178-41-5 | - |
| Cryolite | 13775-53-6 | - |
| Potassium Fluoroborate | 14075-53-7 | - |
| Kaolinite, Hydrous Aluminum Silicate | 1332-58-7 | - |
| Fluoride | 16984-48-8 | - |
| Tetraethylenepentamine | 112-57-2 | - |
| Calcium stearate | 1592-23-0 | - |
| Zinc stearate | 557-05-1 | - |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | 13775-53-6 | - |
| Natural Wax | N/A | - |
| Ethylene glycol | 107-21-1 | Developmental |
| Calcium Sulfate | 7778-18-9 | - |
| Black Iron Oxide | 1317-61-9 | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | 16096-31-4 | - |
| Titanium Dioxide | 13463-67-7 | Carcinogen |
| Crystalline Silica | 14808-60-7 | Carcinogen |

## U.S. Federal Regulations

### US EPA SARA 313

| Chemical name | CAS-No | CERCLA/SARA Hazardous Substances RQ | SARA 313 - Threshold Values |
|---|---|---|---|
| Borosilicate Glass | 65997-17-3 | - | - |
| Vulcanized Fiber | N/A | - | - |
| Alumina Zirconia | 68995-26-0 | - | - |
| Resin | N/A | - | - |
| Bisphenol A - Epichlorohydrin polymer | 25068-38-6 | - | - |
| Aluminum Oxide | 1344-28-1 | - | 1.0 % |
| Silicon Carbide | 409-21-2 | - | - |
| Limestone | 1317-65-3 | - | - |
| Bisphenol F Epoxy Resin | 28064-14-4 | - | - |
| Ziroconium Oxide | 1314-23-4 | - | - |
| Zirconium | 7440-67-7 | - | - |

| Chemical name | CAS-No | CERCLA/SARA Hazardous Substances RQ | SARA 313 - Threshold Values |
|---|---|---|---|
| Garnet | 12178-41-5 | - | - |
| Cryolite | 13775-53-6 | - | - |
| Potassium Fluoroborate | 14075-53-7 | - | - |
| Kaolinite, Hydrous Aluminum Silicate | 1332-58-7 | - | - |
| Fluoride | 16984-48-8 | 10 lb<br>4.54 kg | 1.0 % |
| Tetraethylenepentamine | 112-57-2 | - | - |
| Calcium stearate | 1592-23-0 | - | - |
| Zinc stearate | 557-05-1 | - | 1.0 % |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | 13775-53-6 | - | - |
| Natural Wax | N/A | - | - |
| Ethylene glycol | 107-21-1 | 5000 lb<br>2270 kg | 1.0 % |
| Calcium Sulfate | 7778-18-9 | - | - |
| Black Iron Oxide | 1317-61-9 | - | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | 16096-31-4 | - | - |
| Titanium Dioxide | 13463-67-7 | - | - |
| Crystalline Silica | 14808-60-7 | - | - |

**US EPA SARA 311/312 hazardous categorization** Not applicable

**International inventories** All components of this product are listed on the following inventories: U.S.A. (TSCA 8(b)), Canada (DSL/NDSL) or are exempt.

| Chemical name | DSL/NDSL | Inventory - United States - Section 8(b) Inventory (TSCA) | U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification |
|---|---|---|---|
| Borosilicate Glass | X | X | - |
| Vulcanized Fiber | - | - | - |
| Alumina Zirconia | - | - | - |
| Resin | - | - | - |
| Bisphenol A - Epichlorohydrin polymer | X | X | - |
| Aluminum Oxide | X | X | - |
| Silicon Carbide | X | X | - |
| Limestone | X | X | - |
| Bisphenol F Epoxy Resin | X | X | - |
| Ziroconium Oxide | X | X | - |
| Zirconium | X | X | - |
| Garnet | - | - | - |
| Cryolite | X | X | - |
| Potassium Fluoroborate | X | X | - |
| Kaolinite, Hydrous Aluminum Silicate | X | X | - |
| Fluoride | X | X | - |
| Tetraethylenepentamine | X | X | - |
| Calcium stearate | X | X | - |
| Zinc stearate | X | X | - |
| Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- | X | X | - |
| Natural Wax | - | - | - |
| Ethylene glycol | X | X | - |
| Calcium Sulfate | X | X | - |
| Black Iron Oxide | X | X | - |
| 1,6-(bis(2,3-epoxypropoxy)hexane | X | X | X |

| Chemical name | DSL/NDSL | Inventory - United States - Section 8(b) Inventory (TSCA) | U.S. - TSCA (Toxic Substances Control Act) - Section 12(b) - Export Notification |
|---|---|---|---|
| Titanium Dioxide | X | X | - |
| Crystalline Silica | X | X | - |

Legend X - Listed

## 16. OTHER INFORMATION

### NFPA

| | |
|---|---|
| **Health** | Not available |
| **Flammability** | Not available |
| **Instability** | Not available |

### HMIS

| | |
|---|---|
| **Health** | Not available |
| **Flammability** | Not available |
| **Physical hazards** | Not available |

Notice: 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 are not required on SDSs 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 mark of the National Paint & Coatings Association (NPCA).

**Prepared by** Regulatory Affairs

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**Revision note**

### Key to abbreviations

ACGIH (American Conference of Governmental Industrial Hygienists)
ATE (Average Toxicity Estimate)
DSL/NDSL (Domestic Substance List/Non-Domestic Substance List)
HMIS (Hazardous Materials Identification System)
IARC (International Agency for Research on Cancer)
IATA (International Air Transport Association)
IMDG/IMO (International Maritime Dangerous Goods/International Maritime Orgnaization)
NFPA (National Fire Protection Association)
NTP (National Toxicology Program)
OEL (Occupational Exposure Level)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
PEL (Permissible Exposure Limit)
TSCA (Toxic Substance Control Act)
USEPA (United States Environmental Protection Agency)

**Disclaimer**

**The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.**

**End of Safety Data Sheet**