



## **SAFETY DATA SHEET**

**DDP Specialty Electronic Materials US,  
LLC**

**Product name: BETAPRIME™ 1707 A**

**Issue Date: 10/17/2018**

**Print Date: 01/22/2022**

DDP Specialty Electronic Materials US, LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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### **1. IDENTIFICATION**

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**Product name: BETAPRIME™ 1707 A**

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

**Identified uses:** A primer - For use in automotive applications.

**COMPANY IDENTIFICATION**

DDP Specialty Electronic Materials US,  
LLC

974 Centre Road, Building 730,  
Wilmington DE 19805  
UNITED STATES

**Customer Information Number:**

833-338-7668

SDSQuestion-NA@dupont.com

**EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** 1-800-424-9300

**Local Emergency Contact:** 800-424-9300

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### **2. HAZARDS IDENTIFICATION**

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**Hazard classification**

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids - Category 2

Skin irritation - Category 2

Serious eye damage - Category 1

Skin sensitisation - Category 1

Specific target organ toxicity - single exposure - Category 3

**Label elements**

**Hazard pictograms**



Signal word: **DANGER!**

### Hazards

Highly flammable liquid and vapour.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.

### Precautionary statements

#### Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Keep container tightly closed.  
Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ ventilating/ lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Wash skin thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves/ eye protection/ face protection.

#### Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
If skin irritation or rash occurs: Get medical advice/ attention.  
Take off contaminated clothing and wash before reuse.  
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

#### Storage

Store in a well-ventilated place. Keep container tightly closed.  
Store in a well-ventilated place. Keep cool.  
Store locked up.

#### Disposal

Dispose of contents/ container to an approved waste disposal plant.

### Other hazards

No data available



### 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Dolomite	16389-88-1	> 15.0 - < 25.0 %
Methyl ethyl ketone	78-93-3	> 10.0 - < 20.0 %
Reaction product: Bisphenol A-(epichlorohydrin); epoxy resin (number average molecular weight 700-1100)	25068-38-6	> 10.0 - < 20.0 %
Titanium dioxide	13463-67-7	> 10.0 - < 20.0 %
Mica-group minerals	12001-26-2	> 5.0 - < 15.0 %
Xylene	1330-20-7	> 5.0 - < 15.0 %
Isobutanol	78-83-1	< 10.0 %
n-Butyl Acetate	123-86-4	< 10.0 %
Propylene glycol monomethyl ether	107-98-2	< 10.0 %
Talc	14807-96-6	< 10.0 %
Butanol	71-36-3	< 5.0 %

### 4. FIRST AID MEASURES

#### Description of first aid measures

##### General advice:

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Immediately flush skin with water while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy contaminated leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be available in work area.



**Eye contact:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

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

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

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

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

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## 5. FIREFIGHTING MEASURES

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**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

**Unsuitable extinguishing media:** Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

**Special hazards arising from the substance or mixture**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Container may vent and/or rupture due to fire. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

**Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Avoid accumulation of water. Product may be carried across water surface spreading fire or contacting an ignition source.



**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Absorb with materials such as: Cat litter. Sand. Sawdust. Ground and bond all containers and handling equipment. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Collect in suitable and properly labeled containers. See Section 13, Disposal Considerations, for additional information.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Keep away from heat, sparks and flame. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing vapor or mist. Do not swallow. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. No smoking, open flames or sources of ignition in handling and storage area. Ignition sources can include and are not limited to pilot lights, flames, smoking, sparks, heaters, electrical equipment, and static discharges. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Never use air pressure for transferring product unless a risk assesment has been conducted that includes consideration of the flammability of the product. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Flammable mixtures may exist within the vapor space of containers at room temperature.

### Storage stability

#### Storage temperature:

5 - 25 °C (41 - 77 °F)



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Methyl ethyl ketone	Dow IHG	TWA	50 ppm
	Dow IHG	STEL	100 ppm
	ACGIH	TWA	200 ppm
	ACGIH	STEL	300 ppm
	OSHA Z-1	TWA	590 mg/m3 200 ppm
	ACGIH	TWA Respirable fraction	3 mg/m3
Mica-group minerals	OSHA Z-3	TWA Dust	20 Million particles per cubic foot
	NIOSH REL	TWA Respirable	3 mg/m3
	OSHA P0	TWA respirable dust fraction	3 mg/m3
Xylene	OSHA Z-1	TWA	435 mg/m3 100 ppm
	ACGIH	TWA	100 ppm
	ACGIH	STEL	150 ppm
Isobutanol	Dow IHG	TWA	50 ppm
	Dow IHG	STEL	75 ppm
	ACGIH	TWA	50 ppm
	OSHA Z-1	TWA	300 mg/m3 100 ppm
	OSHA P0	TWA	150 mg/m3 50 ppm
n-Butyl Acetate	Dow IHG	TWA	75 ppm
	Dow IHG	STEL	150 ppm
	OSHA Z-1	TWA	710 mg/m3 150 ppm
	ACGIH	TWA	50 ppm
	ACGIH	STEL	150 ppm
Propylene glycol monomethyl ether	ACGIH	TWA	50 ppm
Butanol	ACGIH	STEL	100 ppm
	ACGIH	TWA	20 ppm
	OSHA Z-1	TWA	300 mg/m3 100 ppm

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material.

### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methyl ethyl ketone	78-93-3	methyl ethyl ketone	Urine	End of shift (As soon as possible after exposure ceases)	2 mg/l	ACGIH BEI





Xylene	1330-20-7	Methylhippuric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ACGIH BEI
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### Exposure controls

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Examples of acceptable glove barrier materials include: Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Appearance

<b>Physical state</b>	Liquid.
<b>Color</b>	White
<b>Odor</b>	Characteristic
<b>Odor Threshold</b>	No test data available
<b>pH</b>	No test data available
<b>Melting point/range</b>	No test data available



<b>Freezing point</b>	No test data available
<b>Boiling point (760 mmHg)</b>	No test data available
<b>Flash point</b>	<b>closed cup</b> -5 °C ( 23 °F) <i>PMCC, ASTM D93</i>
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No test data available
<b>Flammability (solid, gas)</b>	Flammable liquid
<b>Lower explosion limit</b>	No test data available
<b>Upper explosion limit</b>	No test data available
<b>Vapor Pressure</b>	No test data available
<b>Relative Vapor Density (air = 1)</b>	No test data available
<b>Relative Density (water = 1)</b>	1.39 <i>Calculated.</i>
<b>Water solubility</b>	No test data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Auto-ignition temperature</b>	No test data available
<b>Decomposition temperature</b>	No test data available
<b>Dynamic Viscosity</b>	No test data available
<b>Kinematic Viscosity</b>	No test data available
<b>Explosive properties</b>	No test data available
<b>Oxidizing properties</b>	No test data available
<b>Molecular weight</b>	No data available
<b>Volatile Organic Compounds</b>	No test data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Stable under recommended storage conditions. See Storage, Section 7.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose. Avoid static discharge.

**Incompatible materials:** Avoid contact with: Acids. Bases. Oxidizers.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*





**Acute toxicity****Acute oral toxicity**

Low toxicity if swallowed. Swallowing may result in gastrointestinal irritation or ulceration.  
May cause central nervous system effects.  
Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated skin contact may result in absorption of harmful amounts.  
The dermal LD50 has not been determined.

**Acute inhalation toxicity**

Vapor concentrations are attainable which could be hazardous on single exposure. May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness.  
May cause nausea and vomiting.  
The LC50 has not been determined.

**Skin corrosion/irritation**

Brief contact may cause slight skin irritation with local redness.  
Prolonged contact may cause moderate skin irritation with local redness.  
Repeated contact may cause severe skin irritation with local redness and discomfort.  
Vapor may cause skin irritation.  
May cause drying and flaking of the skin.

**Serious eye damage/eye irritation**

May cause severe eye irritation.  
May cause moderate corneal injury.  
Vapor may cause eye irritation experienced as mild discomfort and redness.

**Sensitization**

For skin sensitization:  
A component in this mixture has caused allergic skin reactions in humans.

For respiratory sensitization:  
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Contains component(s) which are classified as specific target organ toxicant, single exposure, category 3.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Contains component(s) which have been reported to cause effects on the following organs in animals:  
Blood.  
Central nervous system.  
Kidney.  
Liver.  
Nasal tissue.  
Xylene is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations; such effects have not been reported in humans.  
Methyl ethyl ketone has caused liver effects in laboratory animals exposed by inhalation to high concentrations.

Methyl ethyl ketone is probably not neurotoxic in itself but it potentiates the neurotoxicity of methyl-n-butyl ketone and n-hexane.

Butanol has been reported to cause eye effects (tearing, blurred vision, sensitivity to light, temporary corneal effects), hearing loss and vertigo.

### **Carcinogenicity**

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic.

### **Teratogenicity**

Exaggerated doses of xylene given orally to pregnant mice resulted in an increase in cleft palate, a common developmental abnormality in mice. In animal inhalation studies, xylene caused toxicity to the fetus but did not cause birth defects. n-Butanol has caused birth defects and has been toxic to the fetus in laboratory animals at doses nontoxic to the mother. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. Contains component(s) which caused birth defects in laboratory animals only at doses toxic to the mother. Contains component(s) which, in laboratory animals, have been toxic to the fetus at doses nontoxic to the mother.

### **Reproductive toxicity**

In animal studies on component(s), effects on reproduction were seen only at doses that produced significant toxicity to the parent animals. Contains component(s) which did not interfere with reproduction in animal studies.

### **Mutagenicity**

Contains component(s) which were negative in some in vitro genetic toxicity studies and positive in others. Contains component(s) which were negative in animal genetic toxicity studies.

### **Aspiration Hazard**

May be harmful if swallowed and enters airways.

### **COMPONENTS INFLUENCING TOXICOLOGY:**

#### **Dolomite**

##### **Acute oral toxicity**

Based on information for a similar material: LD50, Rat, > 2,000 mg/kg OECD Test Guideline 420

##### **Acute dermal toxicity**

Based on information for a similar material: LD50, Rat, > 2,000 mg/kg OECD Test Guideline 402

##### **Acute inhalation toxicity**

Brief exposure (minutes) is not likely to cause adverse effects. Dust may cause irritation to upper respiratory tract (nose and throat).

Based on information for a similar material: LC50, Rat, 4 Hour, dust/mist, > 3 mg/l

#### **Methyl ethyl ketone**

##### **Acute oral toxicity**

LD50, Rat, 2,657 - 5,554 mg/kg



**Acute dermal toxicity**

LD50, Rabbit, &gt; 5,000 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, vapour, 34.5 mg/l

**Reaction product: Bisphenol A-(epichlorohydrin); epoxy resin (number average molecular weight 700-1100)****Acute oral toxicity**

Single dose oral LD50 has not been determined. Typical for this family of materials. LD50, Rat, &gt; 2,000 mg/kg Estimated.

**Acute dermal toxicity**

The dermal LD50 has not been determined.

Typical for this family of materials. LD50, Rabbit, &gt; 2,000 mg/kg

**Acute inhalation toxicity**

The LC50 has not been determined.

**Titanium dioxide****Acute oral toxicity**

LD50, Rat, &gt; 10,000 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, 10,000 mg/kg

**Acute inhalation toxicity**

LC50, Rat, male, 4 Hour, dust/mist, &gt; 6.82 mg/l No deaths occurred at this concentration.

**Mica-group minerals****Acute oral toxicity**

Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

Dust may cause irritation to upper respiratory tract (nose and throat). For the minor component(s): Can irritate the eyes. May cause respiratory tract irritation.

The LC50 has not been determined.

**Xylene****Acute oral toxicity**

LD50, Rat, 4,300 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, &gt; 2,000 mg/kg

**Acute inhalation toxicity**

LC50, Rat, 4 Hour, vapour, 27.5 mg/l

**Isobutanol****Acute oral toxicity**

LD50, Rat, female, 3,350 mg/kg OECD 401 or equivalent

**Acute dermal toxicity**

In animals, effects have been reported on the following organs: Central nervous system.  
LD50, Rabbit, male and female, > 2,000 mg/kg OECD Test Guideline 402 No deaths occurred at this concentration.

**Acute inhalation toxicity**

Prolonged excessive exposure may cause adverse effects. Vapor may cause irritation of the upper respiratory tract (nose and throat). Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. May cause central nervous system effects.

LC50, Rat, male and female, 6 Hour, vapour, > 28.2 mg/l

LC50, Rat, male and female, 4 Hour, vapour, > 8000 ppm

**n-Butyl Acetate****Acute oral toxicity**

LD50, Rat, male, 12,789 mg/kg

LD50 Oral, Rat, female, 10,760 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, male and female, > 14,112 mg/kg

**Acute inhalation toxicity**

The LC50 has not been determined.

**Propylene glycol monomethyl ether****Acute oral toxicity**

LD50, Rat, 4,016 mg/kg

**Acute dermal toxicity**

LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

**Acute inhalation toxicity**

Brief exposure (minutes) is not likely to cause adverse effects. The odor is objectionable at 100 ppm; higher levels produce eye, nose, and throat irritation and are intolerable at 1000 ppm. Anesthetic effects are seen at or above 1000 ppm.

LC50, Rat, 6 Hour, vapour, > 25.8 mg/l

**Talc****Acute oral toxicity**

Single dose oral LD50 has not been determined.

**Acute dermal toxicity**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

The LC50 has not been determined.



**Butanol****Acute oral toxicity**

LD50, Rat, female, 2,292 mg/kg OECD 401 or equivalent

**Acute dermal toxicity**

LD50, Rabbit, male, 3,430 mg/kg OECD Test Guideline 402

**Acute inhalation toxicity**

LC50, Rat, male and female, 4 Hour, vapour, > 17.76 mg/l OECD Test Guideline 403 No deaths occurred at this concentration.

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**12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

**Toxicity****Dolomite****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Based on information for a similar material:

No toxicity at the limit of solubility

LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 16.6 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

No toxicity at the limit of solubility

Based on data from similar materials

EC50, Daphnia magna (Water flea), 48 Hour, > 16.6 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

Based on data from similar materials

NOEC, Desmodesmus subspicatus (green algae), 72 Hour, 14 mg/l, OECD Test Guideline 201

**Methyl ethyl ketone****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 2,993 mg/l, OECD Test Guideline 203

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, 308 mg/l, OECD Test Guideline 202

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (microalgae), static test, 96 Hour, Growth rate inhibition, 2,029 mg/l, OECD Test Guideline 201

**Toxicity to bacteria**

EC50, Bacteria, 96 Hour, > 1,000 mg/l, hUCC

**Reaction product: Bisphenol A-(epichlorohydrin); epoxy resin (number average molecular weight 700-1100)**

**Acute toxicity to fish**

Based on information for a similar material:

Not expected to be acutely toxic, but may cause adverse effects by physical/mechanical means.

**Titanium dioxide**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
NOEC mortality, Leuciscus idus (Golden orfe), static test, 48 Hour, > 1,000 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, > 1,000 mg/l

**Mica-group minerals**

**Acute toxicity to fish**

Not expected to be acutely toxic to aquatic organisms.

**Xylene**

**Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 2.6 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

IC50, Daphnia magna (Water flea), 24 Hour, 1 - 4.7 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (algae), Static, 73 Hour, Growth rate, 4.36 mg/l, OECD Test Guideline 201 or Equivalent

NOEC, Pseudokirchneriella subcapitata (green algae), 73 Hour, Growth rate, 0.44 mg/l, OECD Test Guideline 201 or Equivalent

**Chronic toxicity to fish**

NOEC, Oncorhynchus mykiss (rainbow trout), flow-through, 56 d, mortality, > 1.3 mg/l

**Isobutanol**

**Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 1,430 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia pulex (Water flea), static test, 48 Hour, 1,100 mg/l

**Acute toxicity to algae/aquatic plants**



ErC50, Pseudokirchneriella subcapitata (green algae), static test, 72 Hour, Growth rate inhibition, 1,799 mg/l

**Toxicity to bacteria**

IC50, activated sludge, static test, 16 Hour, Growth inhibition, > 1,000 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), 21 d, number of offspring, 20 mg/l

MATC (Maximum Acceptable Toxicant Level), Daphnia magna (Water flea), 21 d, number of offspring, 28 mg/l

**n-Butyl Acetate****Acute toxicity to fish**

Material is slightly toxic to aquatic organisms on an acute basis (LC50/EC50 between 10 and 100 mg/L in the most sensitive species tested).

LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 18 mg/l

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), 48 Hour, 44 mg/l

**Acute toxicity to algae/aquatic plants**

ErC50, Desmodesmus subspicatus (green algae), 72 Hour, Growth rate inhibition, 648 mg/l

**Toxicity to bacteria**

EC50, Bacteria, 16 Hour, > 1,000 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), 21 d, 23 mg/l

**Propylene glycol monomethyl ether****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

LC50, Leuciscus idus (Golden orfe), static test, 96 Hour, 6,812 mg/l, DIN 38412

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, >= 1,000 mg/l, OECD Test Guideline 203 or Equivalent

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 20,800 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

LC50, Daphnia magna (Water flea), static test, 48 Hour, 21,100 - 25,900 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

ErC50, Pseudokirchneriella subcapitata (green algae), static test, 7 d, Growth rate inhibition, > 1,000 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

IC50, activated sludge, static test, > 1,000 mg/l

**Talc****Acute toxicity to fish**

Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).

LC50, Danio rerio (zebra fish), 24 Hour, > 100,000 mg/l, Method Not Specified.





**Butanol****Acute toxicity to fish**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).  
LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 1,376 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**

EC50, Daphnia magna (Water flea), static test, 48 Hour, 1,328 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**

EC50, Pseudokirchneriella subcapitata (green algae), static test, 96 Hour, Growth rate inhibition, 225 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**

EC50, Pseudomonas putida, static test, 17 Hour, Growth inhibition, > 1,000 mg/l, DIN 38412

**Chronic toxicity to aquatic invertebrates**

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, number of offspring, 4.1 mg/l

**Toxicity to Above Ground Organisms**

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

**Persistence and degradability****Dolomite**

**Biodegradability:** Biodegradation is not applicable.

**Methyl ethyl ketone**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Not applicable

**Biodegradation:** 98 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301D or Equivalent

**Theoretical Oxygen Demand:** 2.44 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	71 - 76 %
10 d	71 - 82 %
20 d	71 - 89 %

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitization:** OH radicals

**Atmospheric half-life:** 8 d

**Method:** Estimated.



**Reaction product: Bisphenol A-(epichlorohydrin); epoxy resin (number average molecular weight 700-1100)**

**Biodegradability:** This water-insoluble polymeric solid is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.

**Titanium dioxide**

**Biodegradability:** Biodegradation is not applicable.

**Mica-group minerals**

**Biodegradability:** Biodegradability is not applicable to inorganic substances.

**Xylene**

**Biodegradability:** Material is expected to be readily biodegradable.

10-day Window: Pass

**Biodegradation:** > 60 %

**Exposure time:** 10 d

**Method:** OECD Test Guideline 301F or Equivalent

**Theoretical Oxygen Demand:** 3.17 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	37.000 %
10 d	58.000 %
20 d	72.000 %

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitization:** OH radicals

**Atmospheric half-life:** 19.7 Hour

**Method:** Estimated.

**Isobutanol**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 70 - 80 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301D or Equivalent

10-day Window: Not applicable

**Biodegradation:** 90 %

**Exposure time:** 14 d

**Method:** OECD Test Guideline 301C or Equivalent

**Theoretical Oxygen Demand:** 2.59 mg/mg Estimated.

**Chemical Oxygen Demand:** 2.29 mg/mg Dichromate

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	64 - 69 %
10 d	73 - 79 %
20 d	72 - 81 %

**Photodegradation****Test Type:** Half-life (indirect photolysis)**Sensitization:** OH radicals**Atmospheric half-life:** 1.55 d**Method:** Estimated.**n-Butyl Acetate****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 83 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301D or Equivalent**Theoretical Oxygen Demand:** 2.20 mg/mg Estimated.**Photodegradation****Sensitization:** OH radicals**Atmospheric half-life:** 2.32 d**Method:** Estimated.**Propylene glycol monomethyl ether****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 96 %**Exposure time:** 28 d**Method:** OECD Test Guideline 301E or Equivalent**Theoretical Oxygen Demand:** 1.95 mg/mg**Chemical Oxygen Demand:** 1.84 mg/g**Photodegradation****Test Type:** Half-life (indirect photolysis)**Sensitization:** OH radicals**Atmospheric half-life:** 7.8 Hour**Method:** Estimated.**Talc****Biodegradability:** Biodegradation is not applicable.**Butanol****Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass



**Biodegradation:** 98 %  
**Exposure time:** 19 d  
**Method:** OECD Test Guideline 301E or Equivalent

**Theoretical Oxygen Demand:** 2.59 mg/mg Estimated.

**Chemical Oxygen Demand:** 2.45 mg/mg Estimated.

**Biological oxygen demand (BOD)**

Incubation Time	BOD
5 d	68 %
10 d	87 %
15 d	92 %
20 d	92 %

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)  
**Sensitization:** OH radicals  
**Atmospheric half-life:** 55.9 Hour  
**Method:** Estimated.

**Bioaccumulative potential**

**Dolomite**

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

**Methyl ethyl ketone**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).  
**Partition coefficient: n-octanol/water(log Pow):** 0.29 Measured

**Reaction product: Bisphenol A-(epichlorohydrin); epoxy resin (number average molecular weight 700-1100)**

**Bioaccumulation:** No relevant data found.

**Titanium dioxide**

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

**Mica-group minerals**

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

**Xylene**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).  
**Partition coefficient: n-octanol/water(log Pow):** 3.12 Measured  
**Bioconcentration factor (BCF):** 25.9 Rainbow trout (Salmo gairdneri) Measured

**Isobutanol**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).  
**Partition coefficient: n-octanol/water(log Pow):** 1 Measured  
**Bioconcentration factor (BCF):** 2 Fish Estimated.

**n-Butyl Acetate**



**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** Pow: 3.2 at 25 °C Measured

**Bioconcentration factor (BCF):** 15 Fish Estimated.

#### Propylene glycol monomethyl ether

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 0.37 at 20 °C Measured

**Bioconcentration factor (BCF):** < 2

#### Talc

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

**Bioconcentration factor (BCF):** 3 Estimated.

#### Butanol

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 1 at 25 °C OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

**Bioconcentration factor (BCF):** 3.16 Fish Estimated.

#### **Mobility in soil**

##### Dolomite

No relevant data found.

##### Methyl ethyl ketone

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 3.8 Estimated.

#### Reaction product: Bisphenol A-(epichlorohydrin); epoxy resin (number average molecular weight 700-1100)

In the terrestrial environment, material is expected to remain in the soil.

In the aquatic environment, material will sink and remain in the sediment.

##### Titanium dioxide

No data available.

##### Mica-group minerals

No relevant data found.

##### Xylene

Potential for mobility in soil is medium (Koc between 150 and 500).

**Partition coefficient (Koc):** 443 Estimated.

##### Isobutanol

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 2 Estimated.

##### n-Butyl Acetate

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 19 - 70 Estimated.

##### Propylene glycol monomethyl ether

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 0.2 - 1.0 Estimated.



**Talc**

No data available.

**Butanol**

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 2.4 Estimated.

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal methods:** DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

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**14. TRANSPORT INFORMATION**

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**DOT**

<b>Proper shipping name</b>	Coating solution
<b>UN number</b>	UN 1139
<b>Class</b>	3
<b>Packing group</b>	II
<b>Reportable Quantity</b>	Xylene, Methyl ethyl ketone

**Classification for SEA transport (IMO-IMDG):**

<b>Proper shipping name</b>	COATING SOLUTION
<b>UN number</b>	UN 1139
<b>Class</b>	3
<b>Packing group</b>	II
<b>Marine pollutant</b>	No
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

<b>Proper shipping name</b>	Coating solution
<b>UN number</b>	UN 1139

<b>Class</b>	3
<b>Packing group</b>	II

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Flammable (gases, aerosols, liquids, or solids)  
 Skin corrosion or irritation  
 Serious eye damage or eye irritation  
 Respiratory or skin sensitisation  
 Specific target organ toxicity (single or repeated exposure)

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

The following components are subject to reporting levels established by SARA Title III, Section 313:

<b>Components</b>	<b>CASRN</b>
Xylene	1330-20-7
Butanol	71-36-3

### Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

<b>Components</b>	<b>CASRN</b>	<b>RQ (RCRA Code)</b>
Xylene	1330-20-7	100 lbs RQ
Xylene	1330-20-7	100 lbs RQ (F003)
Methyl ethyl ketone	78-93-3	5000 lbs RQ
Methyl ethyl ketone	78-93-3	100 lbs RQ (F005)
Isobutanol	78-83-1	5000 lbs RQ
Isobutanol	78-83-1	100 lbs RQ (F005)
Xylene	1330-20-7	100 lbs RQ
Xylene	1330-20-7	100 lbs RQ (F003)
Butanol	71-36-3	5000 lbs RQ
Butanol	71-36-3	100 lbs RQ (F003)

### Pennsylvania Worker and Community Right-To-Know Act:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

<b>Components</b>	<b>CASRN</b>
Methyl ethyl ketone	78-93-3
Titanium dioxide	13463-67-7
Mica-group minerals	12001-26-2





Xylene	1330-20-7
Isobutanol	78-83-1
n-Butyl Acetate	123-86-4
Propylene glycol monomethyl ether	107-98-2
Talc	14807-96-6
Butanol	71-36-3

**California Prop. 65**

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

**United States TSCA Inventory (TSCA)**

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

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**16. OTHER INFORMATION**


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**Hazard Rating System****NFPA**

Health	Flammability	Instability
2	3	1

**Revision**

Identification Number: 229818 / A749 / Issue Date: 10/17/2018 / Version: 12.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	ACGIH - Biological Exposure Indices (BEI)
Dow IHG	Dow Industrial Hygiene Guideline
NIOSH REL	USA. NIOSH Recommended Exposure Limits
OSHA P0	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
STEL	Short term exposure limit
TWA	Time weighted average

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International

Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

#### Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DDP Specialty Electronic Materials US, LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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