# Safety Data Sheet



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| **Document Group:** | 07-4009-2 | **Version Number:** | 3.00 |
| **Issue Date:** | 2016/06/24 | **Supercedes Date:** | 2012/11/30 |

This Safety Data Sheet has been prepared in accordance with China GB/T 16483 safety data sheet for chemical products content and order of sections and China GB/T 17519 Guidance on the compilation of safety data sheet for chemical products.

## IDENTIFICATION

**1.1. Product identifier**
3M™ Scotch-Weld™ EC-9323-2 B/A White

**Product Identification Numbers**

| | | | | |
|---|---|---|---|---|
| FJ-9251-1338-5 | FS-9100-3419-8 | FS-9100-3420-6 | FS-9100-3989-0 | FS-9100-3990-8 |
| FS-9100-4124-3 | FS-9100-4129-2 | FS-9100-4189-6 | FS-9100-5499-8 | FS-9100-5500-3 |
| FS-9100-5501-1 | FS-9100-5502-9 | FS-9100-5507-8 | | |

**1.2. Recommended use and restrictions on use**

**Recommended use**
Two part adhesive, Industrial use

**1.3. Supplier's details**

**Company:** 3M France
**Division:** Aerospace and Commercial Transportation Division
**ADDRESS:** Boulevard de L'Oise F-95006 Cergy Pontoise Cedex France
**Phone:** 021-22105335
**FAX:** 021-22105036
**E Mail:** Tox.cn@mmm.com
**Website:** www.3m.com.cn

**1.4. Emergency telephone number**
National chemical accident emergency consulting hotline: 0532-83889090 (24hr)

**This product is a kit or a multipart product which consists of multiple, independently packaged components. An SDS for each of these components is included. Please do not separate the component SDSs from this cover page. The document numbers of the SDSs for components of this product are:**

07-4007-6, 07-4008-4

## TRANSPORT INFORMATION

Division:_____

**Local Regulations**

**China transport hazard class:** Class 8 Corrosive substances

**International Regulations**

**UN No.:** UN3263
**UN Proper Shipping Name:** CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
**Transport hazard class (IMO):** Corrosives
**Transport hazard class (IATA):** Corrosives
**Packing Group:** II
**Environmental Hazards:**
Marine Pollutant: Yes

**Special precautions for user**
Not applicable.

**Revision information:**
Updates to several SDS sections. We encourage you to reread the SDS and review the information.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

**3M People's Republic of China SDSs are available at www.3m.com.cn**

# Safety Data Sheet



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|---|---|---|---|
| **Document Group:** | 07-4007-6 | **Version Number:** | 4.00 |
| **Issue Date:** | 2016/06/22 | **Supercedes Date:** | 2012/11/30 |

This Safety Data Sheet has been prepared in accordance with China GB/T 16483 safety data sheet for chemical products content and order of sections and China GB/T 17519 Guidance on the compilation of safety data sheet for chemical products.

## SECTION 1: Identification

### 1.1. Product identifier
3M™ Scotch-Weld™ EC-9323-2 B/A White, (Part A)

**Other means of identification**

**Product Identification Numbers**
LZ-C100-0356-0 LZ-C100-0356-1 LZ-C100-0356-2 LZ-C100-0356-3 FJ-9250-6900-9

### 1.2. Recommended use and restrictions on use

**Recommended use**
Part A of 2-part adhesive, Industrial use

### 1.3. Supplier's details
**Company:** 3M France
**Division:** Aerospace and Commercial Transportation Division
**ADDRESS:** Boulevard de L'Oise F-95006 Cergy Pontoise Cedex France
**Phone:** 021-22105335
**FAX:** 021-22105036
**E Mail:** Tox.cn@mmm.com
**Website:** www.3m.com.cn

### 1.4. Emergency telephone number
National chemical accident emergency consulting hotline: 0532-83889090 (24hr)

## SECTION 2: Hazard identification

**Overview of Emergency**

SOLID, Off-white paste, amine odor.
May be harmful if swallowed. May be harmful in contact with skin. Causes severe skin burns and eye damage. May cause an

allergic skin reaction. May damage fertility or the unborn child.

**2.1. Classification of the substance or mixture**
Acute Toxicity (oral): Category 5.
Acute Toxicity (dermal): Category 5.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1B.
Skin Sensitizer: Category 1.
Reproductive Toxicity: Category 1B.

**2.2. Label elements**
**Symbols**
Corrosion | Exclamation mark | Health Hazard |

**Pictograms**

**SIGNAL WORD**
Danger

**HAZARD STATEMENTS**

| | |
|---|---|
| H303 | May be harmful if swallowed. |
| H313 | May be harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H360 | May damage fertility or the unborn child. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P260 | Do not breathe dust/fume/gas/mist/vapors/spray. |
| P280D | Wear protective gloves, protective clothing, and eye/face protection. |

**Response:**

| | |
|---|---|
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P308 + P313 | IF exposed or concerned: Get medical advice/attention. |

**Storage:**

| | |
|---|---|
| P405 | Store locked up. |

**Disposal:**

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with applicable local/regional/national/international regulations. |

**PHYSICAL AND CHEMICAL HAZARDS**
No known GHS hazard classified, see additional information in section 9 and section 10.

**HEALTH HAZARDS**
May be harmful if swallowed. May be harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May damage fertility or the unborn child.

**ENVIRONMENTAL HAZARDS**
No known GHS hazard classified, see additional information in section 12.

**2.3. Other hazards**
May cause chemical gastrointestinal burns.

## SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| Aliphatic Polymer Diamine | 68911-25-1 | 30 - 60 |
| 4,7,10-Trioxatridecane-1,13-Diamine | 4246-51-9 | 10 - 30 |
| Amine Terminated Butadiene Acrylonitrile Polymer | Trade Secret | 10 - 30 |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | 90-72-2 | 7 - 13 |
| Amorphous Silica | 67762-90-7 | 5 - 10 |
| bis[(Dimethylamino)Methyl]Phenol | 71074-89-0 | 1 - 5 |
| N-aminoethylpiperazine | 140-31-8 | < 1 |
| Toluene | 108-88-3 | < 1 |

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation:**
Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**
Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

**Eye Contact:**
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

**If Swallowed:**
Rinse mouth. Do not induce vomiting. Get immediate medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**
See Section 11.1. Information on toxicological effects.

**4.3. Advice to protect the rescuer and special warning to doctors**
Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation and personal protective equipment.

**4.4. Indication of any immediate medical attention and special treatment required**
Not applicable

## SECTION 5: Fire-fighting measures

**5.1. Suitable extinguishing media**
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

**5.2. Special hazards arising from the substance or mixture**
None inherent in this product.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Oxides of Nitrogen | During Combustion |
| Toxic Vapor, Gas, Particulate | During Combustion |

**5.3. Special protective actions for fire-fighters**
No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**
Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Sweep up. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

**6.4. Secondary disaster prevention measures**
Not applicable.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

**7.2. Conditions for safe storage including any incompatibilities**
Store away from heat. Store away from acids.

## SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|---|---|---|---|---|
| Toluene | 108-88-3 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin |
| Toluene | 108-88-3 | Hong Kong OELs | TWA(8 hours):188 mg/m3(50 ppm) | |
| Toluene | 108-88-3 | China OELs | TWA(8 hours):50 mg/m3;STEL(15 minutes):100 mg/m3 | SKIN |
| Toluene | 108-88-3 | CMRG | STEL:75 ppm | SKIN |
| Amorphous Silica | 67762-90-7 | CMRG | CEIL:5 mg/m3 | |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | 90-72-2 | CMRG | TWA:5 ppm | |

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
China OELs : China. Occupational Exposure Limits for Hazardous Agents in the Workplace (GBZ 2.1)
CMRG : Chemical Manufacturer's Recommended Guidelines
Hong Kong OELs : Hong Kong. Occupational Exposure Limits for Chemical Substances in the Work Environment
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

### Biological limit values

| Ingredient | CAS Nbr | Agency | Determinant | Biological Specimen | Sampling Time | Value | Additional comments |
|---|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | China BLVs | | Biological speciman not stated. | Sampling time: Prior to work shift | 5 mg/m3 | |
| Toluene | 108-88-3 | China BLVs | | Creatinine in urine | Sampling time: EOWS (After ceasing exposure) | 1.5 g/g | |
| Toluene | 108-88-3 | China BLVs | | End-exhaled air | Sampling time: EOWS (15-30min aft cease exposure) | 20 mg/m3 | |
| Toluene | 108-88-3 | China BLVs | | Urine | Sampling time: EOWS (After ceasing exposure) | 2 g/l | |
| Toluene | 108-88-3 | ACGIH BEIs | o-Cresol, with hydrolysis | Creatinine in urine | EOS | 0.3 mg/g | |
| Toluene | 108-88-3 | ACGIH BEIs | Toluene | Blood | PSW | 0.02 mg/l | |
| Toluene | 108-88-3 | ACGIH BEIs | Toluene | Urine | EOS | 0.03 mg/l | |

ACGIH BEIs : US. ACGIH. BEIs. Biological Exposure Indices
China BLVs : China. Biological limit values for occupational exposure (WS/T 110 to 115, 239 to 243, and 264 to 267)
EOS: End of shift.
PSW: Prior to last shift of work week.

### 8.2. Exposure controls

#### 8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 8.2.2. Personal protective equipment (PPE)

**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Full Face Shield
Indirect Vented Goggles

**Skin/hand protection**
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.
Gloves made from the following material(s) are recommended: Nitrile Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Boots - Nitrile
Apron – Nitrile

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| **Physical state** | Solid |
| **Specific Physical Form:** | Paste |
| **Appearance/Odor** | Off-white paste, amine odor. |
| **Odor threshold** | *No Data Available* |
| **pH** | *Not Applicable* |
| **Melting point/Freezing point** | *Not Applicable* |
| **Boiling point/Initial boiling point/Boiling range** | >=139 ºC |
| **Flash Point** | >=139 ºC [*Test Method:* Closed Cup] |
| **Evaporation rate** | Negligible |
| **Flammability (solid, gas)** | Not Classified |
| **Flammable Limits(LEL)** | *No Data Available* |
| **Flammable Limits(UEL)** | *No Data Available* |
| **Vapor Pressure** | *No Data Available* |

| | |
|---|---|
| **Vapor Density** | *No Data Available* |
| **Density** | 1 - 1.06 g/cm3 [@ 20 ºC ] |
| **Relative Density** | 1 - 1.06 [*Ref Std:* WATER=1] |
| **Water solubility** | Nil |
| **Solubility- non-water** | *No Data Available* |
| **Partition coefficient: n-octanol/ water** | *No Data Available* |
| **Autoignition temperature** | *No Data Available* |
| **Decomposition temperature** | *No Data Available* |
| **Viscosity** | 60 - 90 Pa-s [@ 23 ºC ] [*Test Method:* Brookfield] |
| **Volatile Organic Compounds** | < 1 % weight |
| **Percent volatile** | <=1 % weight |
| **VOC Less H2O & Exempt Solvents** | < 10 g/l |

## SECTION 10: Stability and reactivity

**10.1. Reactivity**
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

**10.2. Chemical stability**
Stable.

**10.3. Possibility of hazardous reactions**
Hazardous polymerization will not occur.

**10.4. Conditions to avoid**
Heat
Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

**10.5. Incompatible materials**
Strong acids

**10.6. Hazardous decomposition products**

| **Substance** | **Condition** |
|---|---|
| None known. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

**The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.**

**11.1. Information on Toxicological effects**

**Signs and Symptoms of Exposure**

**Based on test data and/or information on the components, this material may produce the following health effects:**

**Inhalation:**
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

**Skin Contact:**
May be harmful in contact with skin.
Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**
Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

**Ingestion:**
May be harmful if swallowed.
Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

May cause additional health effects (see below).

**Additional Health Effects:**

**Reproductive/Developmental Toxicity:**
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

**Toxicological Data**
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Overall product | Dermal | | No data available; calculated ATE 2,000 - 5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE 2,000 - 5,000 mg/kg |
| 4,7,10-Trioxatridecane-1,13-Diamine | Dermal | Rabbit | LD50 2,500 mg/kg |
| 4,7,10-Trioxatridecane-1,13-Diamine | Ingestion | Rat | LD50 3,160 mg/kg |
| Amine Terminated Butadiene Acrylonitrile Polymer | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Amine Terminated Butadiene Acrylonitrile Polymer | Ingestion | Rat | LD50 > 15,300 mg/kg |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | Dermal | Rat | LD50 1,280 mg/kg |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | Ingestion | Rat | LD50 1,000 mg/kg |
| Amorphous Silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Amorphous Silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Amorphous Silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| bis[(Dimethylamino)Methyl]Phenol | Ingestion | | LD50 estimated to be 300 - 2,000 mg/kg |
| N-aminoethylpiperazine | Dermal | Rabbit | LD50 865 mg/kg |
| N-aminoethylpiperazine | Ingestion | Rat | LD50 1,470 mg/kg |
| Toluene | Dermal | Rat | LD50 12,000 mg/kg |
| Toluene | Inhalation-Vapor (4 hours) | Rat | LC50 30 mg/l |

| | | | |
|---|---|---|---|
| Toluene | Ingestion | Rat | LD50 5,550 mg/kg |

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

| Name | Species | Value |
|---|---|---|
| Aliphatic Polymer Diamine | Rabbit | Irritant |
| 4,7,10-Trioxatridecane-1,13-Diamine | Rabbit | Corrosive |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | Rabbit | Corrosive |
| Amorphous Silica | Rabbit | No significant irritation |
| bis[(Dimethylamino)Methyl]Phenol | similar compounds | Corrosive |
| N-aminoethylpiperazine | Rabbit | Corrosive |
| Toluene | Rabbit | Irritant |

### Serious Eye Damage/Irritation

| Name | Species | Value |
|---|---|---|
| Aliphatic Polymer Diamine | similar health hazards | Corrosive |
| 4,7,10-Trioxatridecane-1,13-Diamine | similar health hazards | Corrosive |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | Rabbit | Corrosive |
| Amorphous Silica | Rabbit | No significant irritation |
| bis[(Dimethylamino)Methyl]Phenol | similar compounds | Corrosive |
| N-aminoethylpiperazine | Rabbit | Corrosive |
| Toluene | Rabbit | Moderate irritant |

### Skin Sensitization

| Name | Species | Value |
|---|---|---|
| Aliphatic Polymer Diamine | Guinea pig | Sensitizing |
| Amine Terminated Butadiene Acrylonitrile Polymer | Guinea pig | Some positive data exist, but the data are not sufficient for classification |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | Guinea pig | Some positive data exist, but the data are not sufficient for classification |
| Amorphous Silica | Human and animal | Not sensitizing |
| N-aminoethylpiperazine | Guinea pig | Sensitizing |
| Toluene | Guinea pig | Not sensitizing |

### Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

### Germ Cell Mutagenicity

| Name | Route | Value |
|---|---|---|
| 2,4,6-tris(Dimethylaminoethyl)Phenol | In Vitro | Not mutagenic |
| Amorphous Silica | In Vitro | Not mutagenic |
| N-aminoethylpiperazine | In vivo | Not mutagenic |
| N-aminoethylpiperazine | In Vitro | Some positive data exist, but the data are not sufficient for classification |

| | | |
|---|---|---|
| Toluene | In Vitro | Not mutagenic |
| Toluene | In vivo | Not mutagenic |

## Carcinogenicity

| Name | Route | Species | Value |
|---|---|---|---|
| Amorphous Silica | Not Specified | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Toluene | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Toluene | Ingestion | Rat | Some positive data exist, but the data are not sufficient for classification |
| Toluene | Inhalation | Mouse | Some positive data exist, but the data are not sufficient for classification |

## Reproductive Toxicity

## Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|
| Amorphous Silica | Ingestion | Not toxic to female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Amorphous Silica | Ingestion | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Amorphous Silica | Ingestion | Not toxic to development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| N-aminoethylpiperazine | Ingestion | Not toxic to female reproduction | Rat | NOAEL 598 mg/kg/day | premating & during gestation |
| N-aminoethylpiperazine | Ingestion | Not toxic to male reproduction | Rat | NOAEL 409 mg/kg/day | 32 days |
| N-aminoethylpiperazine | Ingestion | Not toxic to development | Rat | NOAEL 899 mg/kg/day | premating & during gestation |
| Toluene | Inhalation | Some positive female reproductive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| Toluene | Inhalation | Some positive male reproductive data exist, but the data are not sufficient for classification | Rat | NOAEL 2.3 mg/l | 1 generation |
| Toluene | Ingestion | Toxic to development | Rat | LOAEL 520 mg/kg/day | during gestation |
| Toluene | Inhalation | Toxic to development | Human | NOAEL Not available | poisoning and/or abuse |

## Target Organ(s)

## Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| 4,7,10-Trioxatridecane-1,13-Diamine | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| N-aminoethylpiperazine | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| Toluene | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| Toluene | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for | Human | NOAEL Not available | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | classification | | | |
| Toluene | Inhalation | immune system | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 0.004 mg/l | 3 hours |
| Toluene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | poisoning and/or abuse |

## Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| 2,4,6-tris(Dimethylaminoethyl)Phenol | Dermal | skin \| liver \| nervous system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 125 mg/kg/day | 28 days |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | Dermal | auditory system \| hematopoietic system \| eyes | All data are negative | Rat | NOAEL 125 mg/kg/day | 28 days |
| Amorphous Silica | Inhalation | respiratory system \| silicosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| N-aminoethylpiperazine | Ingestion | heart \| endocrine system \| hematopoietic system \| liver \| nervous system \| kidney and/or bladder | All data are negative | Rat | NOAEL 598 mg/kg/day | 28 days |
| Toluene | Inhalation | auditory system \| nervous system \| eyes \| olfactory system | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | poisoning and/or abuse |
| Toluene | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 2.3 mg/l | 15 months |
| Toluene | Inhalation | heart \| liver \| kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 11.3 mg/l | 15 weeks |
| Toluene | Inhalation | endocrine system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1.1 mg/l | 4 weeks |
| Toluene | Inhalation | immune system | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL Not available | 20 days |
| Toluene | Inhalation | bone, teeth, nails, and/or hair | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 1.1 mg/l | 8 weeks |
| Toluene | Inhalation | hematopoietic system \| vascular system | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| Toluene | Ingestion | nervous system | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 625 mg/kg/day | 13 weeks |
| Toluene | Ingestion | heart | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 2,500 mg/kg/day | 13 weeks |
| Toluene | Ingestion | liver \| kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Multiple animal species | NOAEL 2,500 mg/kg/day | 13 weeks |
| Toluene | Ingestion | hematopoietic system | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 600 mg/kg/day | 14 days |
| Toluene | Ingestion | endocrine system | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 105 mg/kg/day | 28 days |
| Toluene | Ingestion | immune system | Some positive data exist, but the data are not sufficient for classification | Mouse | NOAEL 105 mg/kg/day | 4 weeks |

**Aspiration Hazard**

| Name | Value |
|---|---|
| Toluene | Aspiration hazard |

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

## SECTION 12: Ecological information

**The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labeling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.**

**12.1. Toxicity**

**Acute aquatic hazard:**
Not acutely toxic to aquatic life by GHS criteria.

**Chronic aquatic hazard:**
Not chronically toxic to aquatic life by GHS criteria.

No product test data available

| Material | Cas # | Organism | Type | Exposure | Test Endpoint | Test Result |
|---|---|---|---|---|---|---|
| Aliphatic Polymer Diamine | 68911-25-1 | | Data not available or insufficient for classification | | | |
| N-aminoethylpiperazine | 140-31-8 | Green algae | Experimental | 72 hours | Effect Concentration 50% | >1,000 mg/l |
| N-aminoethylpiperazine | 140-31-8 | Water flea | Experimental | 48 hours | Effect Concentration 50% | 32 mg/l |
| N-aminoethylpiperazine | 140-31-8 | Rainbow Trout | Experimental | 96 hours | Lethal Concentration 50% | >100 mg/l |
| N-aminoethylpiperazine | 140-31-8 | Green algae | Experimental | 72 hours | No obs Effect Conc | 31 mg/l |
| 4,7,10-Trioxatridecane-1,13-Diamine | 4246-51-9 | Golden Orfe | Experimental | 96 hours | Lethal Concentration 50% | 220 mg/l |
| 4,7,10-Trioxatridecane-1,13-Diamine | 4246-51-9 | Crustacea | Experimental | 48 hours | Effect Concentration 50% | 220 mg/l |
| 4,7,10-Trioxatridecane-1,13-Diamine | 4246-51-9 | Algae | Experimental | 72 hours | Effect Concentration 50% | 69 mg/l |
| bis[(Dimethyla | 71074-89-0 | | Data not | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| mino)Methyl]Phenol | | | available or insufficient for classification | | | |
| Amorphous Silica | 67762-90-7 | | Data not available or insufficient for classification | | | |
| Amine Terminated Butadiene Acrylonitrile Polymer | Trade Secret | | Data not available or insufficient for classification | | | |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | 90-72-2 | Common Carp | Experimental | 96 hours | Lethal Concentration 50% | 175 mg/l |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | 90-72-2 | Grass Shrimp | Experimental | 96 hours | Lethal Concentration 50% | 718 mg/l |
| Toluene | 108-88-3 | Green Algae | Experimental | 72 hours | Effect Concentration 50% | 12.5 mg/l |
| Toluene | 108-88-3 | Coho Salmon | Experimental | 96 hours | Lethal Concentration 50% | 5.5 mg/l |
| Toluene | 108-88-3 | Water flea | Experimental | 48 hours | Effect Concentration 50% | 3.78 mg/l |
| Toluene | 108-88-3 | Sheepshead Minnow | Experimental | 28 days | No obs Effect Conc | 3.2 mg/l |

**12.2. Persistence and degradability**

| **Material** | **CAS No.** | **Test Type** | **Duration** | **Study Type** | **Test Result** | **Protocol** |
|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | Experimental Photolysis | | Photolytic half-life (in air) | 5.38 days (t 1/2) | Other methods |
| Amorphous Silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| bis[(Dimethylamino)Methyl]Phenol | 71074-89-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Amine Terminated Butadiene Acrylonitrile Polymer | Trade Secret | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Aliphatic Polymer Diamine | 68911-25-1 | Data not available or insufficient for | N/A | N/A | N/A | N/A |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | classification | | | | |
| 4,7,10-Trioxatridecane-1,13-Diamine | 4246-51-9 | Estimated Biodegradation | 28 days | Biological Oxygen Demand | 12.6 % weight | OECD 301C - MITI (I) |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | 90-72-2 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 4 % weight | OECD 301D - Closed Bottle Test |
| Toluene | 108-88-3 | Experimental Biodegradation | 14 days | Biological Oxygen Demand | 100 % weight | OECD 301C - MITI (I) |
| N-aminoethylpiperazine | 140-31-8 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 0 % weight | OECD 301C - MITI (I) |

**12.3. Bioaccumulative potential**

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|---|---|---|---|---|---|---|
| Amorphous Silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Aliphatic Polymer Diamine | 68911-25-1 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| bis[(Dimethylamino)Methyl]Phenol | 71074-89-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Amine Terminated Butadiene Acrylonitrile Polymer | Trade Secret | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 4,7,10-Trioxatridecane-1,13-Diamine | 4246-51-9 | Estimated Bioconcentration | | Log of Octanol/H2O part. coeff | -1.46 | Other methods |
| 2,4,6-tris(Dimethylaminoethyl)Phenol | 90-72-2 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | -0.66 | Other methods |
| N-aminoethylpiperazine | 140-31-8 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 0.3 | Other methods |
| Toluene | 108-88-3 | Experimental Bioconcentration | | Log of Octanol/H2O part. coeff | 2.73 | Other methods |

**12.4. Mobility in soil**
Please contact manufacturer for more details

**12.5 Other adverse effects**

No information available

## SECTION 13: Disposal considerations

**13.1. Disposal methods**
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

## SECTION 14: Transport Information

**Local Regulations**

**China transport hazard class:** Class 8 Corrosive substances

**International Regulations**

**UN No.:** UN3263
**UN Proper Shipping Name:** CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
**Transport hazard class (IMO):** Corrosives
**Transport hazard class (IATA):** Corrosives
**Packing Group:** II
**Environmental Hazards:**
Not applicable

**Special precautions for user**
Not applicable.

## SECTION 15: Regulatory information

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

**Measures on Environmental Management of New Chemical Substances**
This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

**Regulations on the Control over Safety of Dangerous Chemicals**
Catalog of Hazardous Chemicals (2015 version): Below ingredient(s) are listed

| C.A.S. No. | Ingredient | Very Toxic Chemical |
|---|---|---|
| 108-88-3 | Toluene | No |
| 140-31-8 | N-aminoethylpiperazine | No |

GB18218 Identification of Major Hazard Installations of Dangerous Chemicals:
Ingredients information: below ingredient(s) are listed

| C.A.S. No. | Ingredient | Threshold Quantity(T) |
|---|---|---|

| | | |
|---|---|---|
| 108-88-3 | Toluene | 500 |

**Regulations on Labor Protection in Workplaces where Toxic Substances are Used**
Highly Toxic Chemicals: No Ingredient is listed

This safety data sheet is in compliance with the following national standards:
GB/T 17519 Guidance on the compilation of safety data sheet for chemical products;
GB 15258 General rules for preparation of precautionary label for chemicals;
GB 30000.1-GB30000.29 Rules for classification and labelling for chemicals;
GBZ/T 210.1-2008 Guide for establishing occupational health standards-Part 1: Occupational exposure limits for airborne chemical in the workplace;
GBZ/T 210.2-2008 Guide for establishing occupational health standards-Part 2: Occupational exposure limits for airborne dusts in the workplace;
GBZ/T 210.3-2008 Guide for establishing occupational health standards-Part 3: Occupational exposure Limit for physical agents in workplace;
GB6944 Classification and code of dangerous goods;
GB/T 15098 The principle of transport packaging groups of dangerous goods;
GB 12268 List of Dangerous goods.

For more information, contact the manufacturer listed in Section 1 of this Safety Data Sheet.

## SECTION 16: Other information

**References**
United Nations 'Recommendations on the Transport of Dangerous Goods - Model Regulations '
United Nations 'Globally Harmonized System of Classification and Labelling of Chemicals (GHS)'.

**Revision information:**
Updates to several SDS sections. We encourage you to reread the SDS and review the information.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

**3M People's Republic of China SDSs are available at www.3m.com.cn**

# Safety Data Sheet



| | | | |
|---|---|---|---|
| **Document Group:** | 07-4008-4 | **Version Number:** | 3.00 |
| **Issue Date:** | 2016/06/24 | **Supercedes Date:** | 2012/11/30 |

This Safety Data Sheet has been prepared in accordance with China GB/T 16483 safety data sheet for chemical products content and order of sections and China GB/T 17519 Guidance on the compilation of safety data sheet for chemical products.

## SECTION 1: Identification

### 1.1. Product identifier
3M™ Scotch-Weld™ EC-9323-2 B/A White, (Part B)

**Other means of identification**

**Product Identification Numbers**
LZ-C100-0354-9 LZ-C100-0356-4 LZ-C100-0356-5 LZ-C100-0356-6 FJ-9250-6899-3

### 1.2. Recommended use and restrictions on use

**Recommended use**
Two part adhesive, Industrial use

### 1.3. Supplier's details
**Company:** 3M France
**Division:** Aerospace and Commercial Transportation Division
**ADDRESS:** Boulevard de L'Oise F-95006 Cergy Pontoise Cedex France
**Phone:** 021-22105335
**FAX:** 021-22105036
**E Mail:** Tox.cn@mmm.com
**Website:** www.3m.com.cn

### 1.4. Emergency telephone number
National chemical accident emergency consulting hotline: 0532-83889090 (24hr)

## SECTION 2: Hazard identification

**Overview of Emergency**

SOLID, white paste, epoxy odor.
Causes mild skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing cancer.

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

**2.1. Classification of the substance or mixture**
Serious Eye Damage/Irritation: Category 2A.
Skin Corrosion/Irritation: Category 3.
Skin Sensitizer: Category 1.
Carcinogenicity: Category 2.
Acute Aquatic Toxicity: Category 2.
Chronic Aquatic Toxicity: Category 3.

**2.2. Label elements**
**Symbols**
Exclamation mark | Health Hazard |

**Pictograms**

**SIGNAL WORD**
Warning

**HAZARD STATEMENTS**

| | |
|---|---|
| H319 | Causes serious eye irritation. |
| H316 | Causes mild skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H351 | Suspected of causing cancer. |
| H401 | Toxic to aquatic life. |
| H412 | Harmful to aquatic life with long lasting effects. |

**PRECAUTIONARY STATEMENTS**

**Prevention:**

| | |
|---|---|
| P280E | Wear protective gloves. |

**Response:**

| | |
|---|---|
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |

**Storage:**

| | |
|---|---|
| P405 | Store locked up. |

**Disposal:**

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with applicable local/regional/national/international regulations. |

**PHYSICAL AND CHEMICAL HAZARDS**
No known GHS hazard classified, see additional information in section 9 and section 10.

**HEALTH HAZARDS**

Causes serious eye irritation. Causes mild skin irritation. May cause an allergic skin reaction. Suspected of causing cancer.

**ENVIRONMENTAL HAZARDS**
Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

**2.3. Other hazards**
None known

## SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt |
|---|---|---|
| Epoxy Resin | 25068-38-6 | 40 - 70 |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | 14228-73-0 | 10 - 30 |
| Acrylic copolymer | None | 10 - 30 |
| Glass Bubbles | 65997-17-3 | 1 - 5 |
| Silicone Dioxide | 67762-90-7 | 1 - 5 |
| Titanium Dioxide | 13463-67-7 | 1 - 5 |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | 0.5 - 1.5 |
| Silane, triethoxy[3-(oxiranylmethoxy)propyl]- | 2602-34-8 | 0 - 1.5 |

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation:**
Remove person to fresh air. If you feel unwell, get medical attention.

**Skin Contact:**
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

**Eye Contact:**
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

**If Swallowed:**
Rinse mouth. If you feel unwell, get medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**
See Section 11.1. Information on toxicological effects.

**4.3. Advice to protect the rescuer and special warning to doctors**
Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation and personal protective equipment.

**4.4. Indication of any immediate medical attention and special treatment required**
Not applicable

# SECTION 5: Fire-fighting measures

**5.1. Suitable extinguishing media**
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

**5.2. Special hazards arising from the substance or mixture**
None inherent in this product.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Aldehydes | During Combustion |
| Hydrocarbons | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Hydrogen Chloride | During Combustion |

**5.3. Special protective actions for fire-fighters**
No special protective actions for fire-fighters are anticipated.

# SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**
Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**
Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

**6.4. Secondary disaster prevention measures**
Not applicable.

# SECTION 7: Handling and storage

**7.1. Precautions for safe handling**
Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (gloves, respirators, etc.) as required.

**7.2. Conditions for safe storage including any incompatibilities**
Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidizing agents. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from amines.

# SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Occupational exposure limits**

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|---|---|---|---|---|
| Titanium Dioxide | 13463-67-7 | China OELs | TWA(as total dust)(8 hours):8 mg/m3 | |
| Titanium Dioxide | 13463-67-7 | Hong Kong OELs | TWA(as inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3 | |
| Titanium Dioxide | 13463-67-7 | CMRG | TWA(as respirable dust):5 mg/m3 | |
| Titanium Dioxide | 13463-67-7 | ACGIH | TWA:10 mg/m3 | A4: Not class. as human carcin |
| Epoxy Resin | 25068-38-6 | Hong Kong OELs | Limit value not established: | |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | CMRG | TWA:5 ppm | |
| GLASS FILAMENTS | 65997-17-3 | Hong Kong OELs | TWA(as fiber)(8 hours):5 mg/m3(1 f/mL) | |
| GLASS FILAMENTS | 65997-17-3 | China OELs | TWA(as fibers, total dust)(8 hours):3 mg/m3;TWA(as total dust)(8 hours):3 mg/m3 | |
| SPECIAL PURPOSE GLASS FIBERS | 65997-17-3 | ACGIH | TWA(as fiber):1 fiber/cc | A3: Confirmed animal carcin. |
| ROCK WOOL FIBERS | 65997-17-3 | ACGIH | TWA(as fiber):1 fiber/cc | A3: Confirmed animal carcin. |
| Glass Bubbles | 65997-17-3 | Manufacturer determined | TWA(as dust):10 mg/m3 | |
| GLASS WOOL FIBERS | 65997-17-3 | ACGIH | TWA(as fiber):1 fiber/cc | A3: Confirmed animal carcin. |
| CERAMIC FIBERS | 65997-17-3 | ACGIH | TWA(as fiber):0.2 fiber/cc | A2: Suspected human carcin. |
| SLAG WOOL FIBERS | 65997-17-3 | ACGIH | TWA(as fiber):1 fiber/cc | A3: Confirmed animal carcin. |
| CONTINUOUS FILAMENT GLASS FIBERS, INHALABLE FRACTION | 65997-17-3 | ACGIH | TWA(inhalable fraction):5 mg/m3 | A4: Not class. as human carcin |
| CONTINUOUS FILAMENT GLASS FIBERS | 65997-17-3 | ACGIH | TWA(as fiber):1 fiber/cc | A4: Not class. as human carcin |
| Silicone Dioxide | 67762-90-7 | CMRG | CEIL:5 mg/m3 | |

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
China OELs : China. Occupational Exposure Limits for Hazardous Agents in the Workplace (GBZ 2.1)
CMRG : Chemical Manufacturer's Recommended Guidelines
Hong Kong OELs : Hong Kong. Occupational Exposure Limits for Chemical Substances in the Work Environment
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

**Biological limit values**

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

### 8.2. Exposure controls

#### 8.2.1. Engineering controls
Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust ventilation for cutting, grinding, sanding or machining. Curing enclosures must be exhausted to outdoors or to a suitable emission control device.

#### 8.2.2. Personal protective equipment (PPE)

**Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Indirect Vented Goggles

**Skin/hand protection**
Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.
Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

**Respiratory protection**

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:
Half facepiece air-purifying respirator suitable for organic vapors and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| **Physical state** | Solid |
| **Specific Physical Form:** | Paste |
| **Appearance/Odor** | white paste, epoxy odor. |
| **Odor threshold** | *No Data Available* |
| **pH** | *Not Applicable* |
| **Melting point/Freezing point** | *Not Applicable* |
| **Boiling point/Initial boiling point/Boiling range** | >=93 ºC |
| **Flash Point** | >=93.9 ºC [*Test Method:* Closed Cup] |
| **Evaporation rate** | Nil |
| **Flammability (solid, gas)** | Not Classified |
| **Flammable Limits(LEL)** | *No Data Available* |
| **Flammable Limits(UEL)** | *No Data Available* |
| **Vapor Pressure** | *No Data Available* |

| | |
|---|---|
| **Vapor Density** | *No Data Available* |
| **Density** | 1 - 1.08 g/ml [@ 20 ºC ] |
| **Relative Density** | 1 - 1.08 [*Ref Std:* WATER=1] |
| **Water solubility** | Nil |
| **Solubility- non-water** | *No Data Available* |
| **Partition coefficient: n-octanol/ water** | *No Data Available* |
| **Autoignition temperature** | *No Data Available* |
| **Decomposition temperature** | *No Data Available* |
| **Viscosity** | 100 - 530 Pa-s [@ 25 ºC ] [*Test Method:* Brookfield] |
| **Volatile Organic Compounds** | 0 g/l |
| **Percent volatile** | <=1 % weight |
| **VOC Less H2O & Exempt Solvents** | 0 g/l |

## SECTION 10: Stability and reactivity

**10.1. Reactivity**
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

**10.2. Chemical stability**
Stable.

**10.3. Possibility of hazardous reactions**
Hazardous polymerization will not occur.

**10.4. Conditions to avoid**
Heat
Heat is generated during cure. Do not cure a mass larger than 50 grams in a confined space to prevent a premature exothermic reaction with production of intense heat and smoke.

**10.5. Incompatible materials**
Amines
Strong acids
Strong oxidizing agents

**10.6. Hazardous decomposition products**

| **Substance** | **Condition** |
|---|---|
| None known. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

**The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.**

**11.1. Information on Toxicological effects**

**Signs and Symptoms of Exposure**

**Based on test data and/or information on the components, this material may produce the following health effects:**

**Inhalation:**
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

**Skin Contact:**
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

**Ingestion:**
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Additional Health Effects:**

**Carcinogenicity:**
Contains a chemical or chemicals which can cause cancer.

**Toxicological Data**
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

| Name | Route | Species | Value |
|---|---|---|---|
| Overall product | Dermal | | No data available; calculated ATE > 5,000 mg/kg |
| Overall product | Inhalation-Dust/Mist(4 hr) | | No data available; calculated ATE > 12.5 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE > 5,000 mg/kg |
| Epoxy Resin | Dermal | Rat | LD50 > 1,600 mg/kg |
| Epoxy Resin | Ingestion | Rat | LD50 > 1,000 mg/kg |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Dermal | Rabbit | LD50 2,500 mg/kg |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Ingestion | Rat | LD50 2,450 mg/kg |
| Titanium Dioxide | Dermal | Rabbit | LD50 > 10,000 mg/kg |
| Titanium Dioxide | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 6.82 mg/l |
| Titanium Dioxide | Ingestion | Rat | LD50 > 10,000 mg/kg |
| Silicone Dioxide | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Silicone Dioxide | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Silicone Dioxide | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Glass Bubbles | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Glass Bubbles | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Dermal | Rabbit | LD50 4,000 mg/kg |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.3 mg/l |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Ingestion | Rat | LD50 7,010 mg/kg |

ATE = acute toxicity estimate

## Skin Corrosion/Irritation

| Name | Species | Value |
|---|---|---|
| Epoxy Resin | Rabbit | Mild irritant |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Professional judgement | Mild irritant |
| Titanium Dioxide | Rabbit | No significant irritation |
| Silicone Dioxide | Rabbit | No significant irritation |
| Glass Bubbles | Professional judgement | No significant irritation |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Rabbit | Mild irritant |

## Serious Eye Damage/Irritation

| Name | Species | Value |
|---|---|---|
| Epoxy Resin | Rabbit | Moderate irritant |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Professional judgement | Mild irritant |
| Titanium Dioxide | Rabbit | No significant irritation |
| Silicone Dioxide | Rabbit | No significant irritation |
| Glass Bubbles | Professional judgement | No significant irritation |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Rabbit | Corrosive |

## Skin Sensitization

| Name | Species | Value |
|---|---|---|
| Epoxy Resin | Human and animal | Sensitizing |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | similar compounds | Sensitizing |
| Titanium Dioxide | Human and animal | Not sensitizing |
| Silicone Dioxide | Human and animal | Not sensitizing |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Guinea pig | Some positive data exist, but the data are not sufficient for classification |

## Respiratory Sensitization

| Name | Species | Value |
|---|---|---|
| Epoxy Resin | Human | Some positive data exist, but the data are not sufficient for classification |

## Germ Cell Mutagenicity

| Name | Route | Value |
|---|---|---|
| Epoxy Resin | In vivo | Not mutagenic |
| Epoxy Resin | In Vitro | Some positive data exist, but the data are not |

| | | |
|---|---|---|
| | | sufficient for classification |
| Titanium Dioxide | In Vitro | Not mutagenic |
| Titanium Dioxide | In vivo | Not mutagenic |
| Silicone Dioxide | In Vitro | Not mutagenic |
| Glass Bubbles | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | In vivo | Not mutagenic |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | In Vitro | Some positive data exist, but the data are not sufficient for classification |

## Carcinogenicity

| Name | Route | Species | Value |
|---|---|---|---|
| Epoxy Resin | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Titanium Dioxide | Ingestion | Multiple animal species | Not carcinogenic |
| Titanium Dioxide | Inhalation | Rat | Carcinogenic |
| Silicone Dioxide | Not Specified | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Glass Bubbles | Inhalation | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Dermal | Mouse | Not carcinogenic |

## Reproductive Toxicity

## Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|
| Epoxy Resin | Ingestion | Not toxic to female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Epoxy Resin | Ingestion | Not toxic to male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Epoxy Resin | Dermal | Not toxic to development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |
| Epoxy Resin | Ingestion | Not toxic to development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Silicone Dioxide | Ingestion | Not toxic to female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Silicone Dioxide | Ingestion | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Silicone Dioxide | Ingestion | Not toxic to development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Ingestion | Not toxic to female reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Ingestion | Not toxic to male reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Ingestion | Some positive developmental data exist, but the data are not sufficient for classification | Rat | NOAEL 3,000 mg/kg/day | during organogenesis |

## Target Organ(s)

## Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |

**Specific Target Organ Toxicity - repeated exposure**

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|---|---|---|---|---|---|
| Epoxy Resin | Dermal | liver | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| Epoxy Resin | Dermal | nervous system | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| Epoxy Resin | Ingestion | auditory system \| heart \| endocrine system \| hematopoietic system \| liver \| eyes \| kidney and/or bladder | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| Titanium Dioxide | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 0.01 mg/l | 2 years |
| Titanium Dioxide | Inhalation | pulmonary fibrosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| Silicone Dioxide | Inhalation | respiratory system \| silicosis | All data are negative | Human | NOAEL Not available | occupational exposure |
| Glass Bubbles | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL not available | occupational exposure |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | Ingestion | heart \| endocrine system \| bone, teeth, nails, and/or hair \| hematopoietic system \| liver \| immune system \| nervous system \| kidney and/or bladder \| respiratory system | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 28 days |

**Aspiration Hazard**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.**

## SECTION 12: Ecological information

**The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labeling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.**

**12.1. Toxicity**

**Acute aquatic hazard:**
GHS Acute 2: Toxic to aquatic life.

**Chronic aquatic hazard:**
GHS Chronic 3: Harmful to aquatic life with long lasting effects

No product test data available

| Material | Cas # | Organism | Type | Exposure | Test Endpoint | Test Result |
|---|---|---|---|---|---|---|
| Silane, triethoxy[3-(oxiranylmethoxy)propyl]- | 2602-34-8 | | Data not available or insufficient for classification | | | |
| Silicone Dioxide | 67762-90-7 | Zebra Fish | Experimental | 96 hours | Lethal Concentration 50% | >10,000 mg/l |
| Glass Bubbles | 65997-17-3 | Water flea | Experimental | 72 hours | Effect Concentration 50% | >1,000 mg/l |
| Glass Bubbles | 65997-17-3 | Zebra Fish | Experimental | 96 hours | Lethal Concentration 50% | >1,000 mg/l |
| Glass Bubbles | 65997-17-3 | Green algae | Experimental | 72 hours | No obs Effect Conc | >=1,000 mg/l |
| Glass Bubbles | 65997-17-3 | Green algae | Experimental | 72 hours | Effect Concentration 50% | >1,000 mg/l |
| Epoxy Resin | 25068-38-6 | Water flea | Estimated | 21 days | No obs Effect Conc | 0.3 mg/l |
| Epoxy Resin | 25068-38-6 | Ricefish | Experimental | 96 hours | Lethal Concentration 50% | 1.41 mg/l |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | 14228-73-0 | Green algae | Estimated | 72 hours | No obs Effect Conc | 29 mg/l |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | 14228-73-0 | Green algae | Estimated | 72 hours | Effect Concentration 50% | >93 mg/l |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | 14228-73-0 | Water flea | Estimated | 48 hours | Effect Concentration 50% | 22 mg/l |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | 14228-73-0 | Ricefish | Estimated | 96 hours | Lethal Concentration 50% | 13 mg/l |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | Green algae | Experimental | 96 hours | Effect Concentration 50% | 350 mg/l |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | Green Algae | Experimental | 96 hours | No obs Effect Conc | 130 mg/l |
| 3-(Trimethoxysilyl)Propyl | 2530-83-8 | Water flea | Experimental | 21 days | No obs Effect Conc | >=100 mg/l |

| | | | | | | |
|---|---|---|---|---|---|---|
| Glycidyl Ether | | | | | | |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | Crustecea other | Experimental | 48 hours | Lethal Concentration 50% | 324 mg/l |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | Common Carp | Experimental | 96 hours | Lethal Concentration 50% | 55 mg/l |
| Titanium Dioxide | 13463-67-7 | Fish | Experimental | 30 days | No obs Effect Conc | >100 mg/l |
| Titanium Dioxide | 13463-67-7 | Water flea | Experimental | 30 days | No obs Effect Conc | 3 mg/l |
| Titanium Dioxide | 13463-67-7 | Water flea | Experimental | 48 hours | Effect Concentration 50% | >100 mg/l |
| Titanium Dioxide | 13463-67-7 | Sheepshead Minnow | Experimental | 96 hours | Lethal Concentration 50% | >240 mg/l |

**12.2. Persistence and degradability**

| **Material** | **CAS No.** | **Test Type** | **Duration** | **Study Type** | **Test Result** | **Protocol** |
|---|---|---|---|---|---|---|
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | 14228-73-0 | Estimated Hydrolysis | | Hydrolytic half-life | 7 days (t 1/2) | Other methods |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | Experimental Hydrolysis | | Hydrolytic half-life | 6.5 hours (t 1/2) | Other methods |
| Epoxy Resin | 25068-38-6 | Laboratory Hydrolysis | | Hydrolytic half-life | <2 days (t 1/2) | Other methods |
| Silicone Dioxide | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Titanium Dioxide | 13463-67-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Glass Bubbles | 65997-17-3 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Silane, triethoxy[3-(oxiranylmethoxy)propyl]- | 2602-34-8 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 1,4-bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | 14228-73-0 | Estimated Biodegradation | 28 days | Carbon dioxide evolution | 64 % weight | OECD 301B - Mod. Sturm or CO2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1,4-bis[(2,3-Epoxypropoxy) Methyl]Cyclohexane | 14228-73-0 | Estimated Biodegradation | 28 days | Biological Oxygen Demand | 4 % weight | OECD 301C - MITI (I) |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | Experimental Biodegradation | 28 days | Dissolv. Organic Carbon Deplet | 37 % weight | Other methods |
| Epoxy Resin | 25068-38-6 | Laboratory Biodegradation | 28 days | Biological Oxygen Demand | 0 % weight | OECD 301C - MITI (I) |
| Epoxy Resin | 25068-38-6 | Experimental Biodegradation | 28 days | Biological Oxygen Demand | 0 % weight | OECD 301C - MITI (I) |
| Epoxy Resin | 25068-38-6 | Estimated Hydrolysis | | Hydrolytic half-life | <2 days (t 1/2) | Other methods |

**12.3. Bioaccumulative potential**

| Material | CAS No. | Test Type | Duration | Study Type | Test Result | Protocol |
|---|---|---|---|---|---|---|
| Silicone Dioxide | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Glass Bubbles | 65997-17-3 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 3-(Trimethoxysilyl)Propyl Glycidyl Ether | 2530-83-8 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 1,4-bis[(2,3-Epoxypropoxy) Methyl]Cyclohexane | 14228-73-0 | Estimated BCF - Other | | Bioaccumulation Factor | 3 | Est: Bioconcentration factor |
| Titanium Dioxide | 13463-67-7 | Experimental BCF-Carp | 42 days | Bioaccumulation Factor | 9.6 | Other methods |
| Epoxy Resin | 25068-38-6 | Laboratory BCF - Other | 28 days | Bioaccumulation Factor | <42 | Other methods |
| Silane, triethoxy[3-(oxiranylmethoxy)propyl]- | 2602-34-8 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| 1,4-bis[(2,3-Epoxypropoxy) Methyl]Cyclohexane | 14228-73-0 | Estimated Bioconcentration | | Bioaccumulation Factor | 3 | Est: Bioconcentration factor |
| Epoxy Resin | 25068-38-6 | Experimental BCF-Carp | 28 days | Bioaccumulation Factor | <=42 | Other methods |

**12.4. Mobility in soil**

Please contact manufacturer for more details

**12.5 Other adverse effects**
No information available

## SECTION 13: Disposal considerations

**13.1. Disposal methods**
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

## SECTION 14: Transport Information

**Local Regulations**
**Not hazardous for transportation.**

**China transport hazard class:** Not applicable

**International Regulations**
**Not hazardous for transportation.**

**UN No.:** Not applicable
**UN Proper Shipping Name:** Not applicable
**Transport hazard class (IMO):** Not applicable
**Transport hazard class (IATA):** Not applicable
**Packing Group:** Not applicable
**Environmental Hazards:**
Not applicable

**Special precautions for user**
Not applicable.

## SECTION 15: Regulatory information

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

**Measures on Environmental Management of New Chemical Substances**
This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

**Regulations on the Control over Safety of Dangerous Chemicals**
Catalog of Hazardous Chemicals (2015 version): No Ingredient is listed

GB18218 Identification of Major Hazard Installations of Dangerous Chemicals:
No Ingredient is listed

**Regulations on Labor Protection in Workplaces where Toxic Substances are Used**

Highly Toxic Chemicals: No Ingredient is listed

This safety data sheet is in compliance with the following national standards:
GB/T 17519 Guidance on the compilation of safety data sheet for chemical products;
GB 15258 General rules for preparation of precautionary label for chemicals;
GB 30000.1-GB30000.29 Rules for classification and labelling for chemicals;
GBZ/T 210.1-2008 Guide for establishing occupational health standards-Part 1: Occupational exposure limits for airborne chemical in the workplace;
GBZ/T 210.2-2008 Guide for establishing occupational health standards-Part 2: Occupational exposure limits for airborne dusts in the workplace;
GBZ/T 210.3-2008 Guide for establishing occupational health standards-Part 3: Occupational exposure Limit for physical agents in workplace;
GB6944 Classification and code of dangerous goods;
GB/T 15098 The principle of transport packaging groups of dangerous goods;
GB 12268 List of Dangerous goods.

For more information, contact the manufacturer listed in Section 1 of this Safety Data Sheet.

## SECTION 16: Other information

**References**
United Nations 'Recommendations on the Transport of Dangerous Goods - Model Regulations '
United Nations 'Globally Harmonized System of Classification and Labelling of Chemicals (GHS)'.

**Revision information:**
Updates to several SDS sections. We encourage you to reread the SDS and review the information.

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