



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

IDENTIFICATION

1.1. Product identifier

3M™ Panel Bonding Adhesive PN 08115

Product Identification Numbers

60-9800-3093-0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use

Automotive.

1.3. Supplier's details

Address: 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
Telephone: 080-45543000, contact Product EHS team
E Mail: productehs.in@mmm.com
Website: <http://solutions.3mindia.co.in>

1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet for each of these components is included. Please do not separate the component Safety Data Sheets from this cover page. The document numbers of the MSDSs for components of this product are:

32-4327-6, 09-3599-9

TRANSPORT INFORMATION

Air Transport (IATA)Regulations

UN No UN3267

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL AND

BIS((DIMETHYLAMINO)METHYL)PHENOL)

Hazard Classs/Division 8

Subsidiary Risk Not applicable

Packing Group: II

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable (BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL AND BIS((DIMETHYLAMINO)METHYL)PHENOL)

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: Not applicable

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3M India SDSs are available at <http://solutions.3mindia.co.in>



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| | | | |
|------------------------|------------|-------------------------|------------|
| Document group: | 09-3599-9 | Version number: | 1.01 |
| Issue Date: | 03/09/2025 | Supersedes date: | 06/04/2020 |

This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding (90 Minutes) Adhesive Part A (Accelerator) PN 08115, 38315, 38515, 58115

1.2. Recommended use and restrictions on use

Recommended use

Automotive., Use with Part B, MSDS 32-4327-6

1.3. Supplier's details

| | |
|-------------------|---|
| Address: | 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100 |
| Telephone: | 080-45543000, contact Product EHS team |
| E Mail: | productehs.in@mmm.com |
| Website: | http://solutions.3mindia.co.in |

1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture

Acute Toxicity (oral): Category 5.

Acute Toxicity (dermal): Category 5.

Skin Corrosion/Irritation: Category 1B.

Serious Eye Damage/Irritation: Category 1.

Skin Sensitizer: Category 1B.

Reproductive Toxicity: Category 1B.

Specific Target Organ Toxicity (single exposure): Category 1.

Specific Target Organ Toxicity (single exposure): Category 3.

Acute Aquatic Toxicity: Category 1.

Chronic Aquatic Toxicity: Category 1.

2.2. Label elements

Signal Word

Danger

Symbols

Corrosion | Exclamation mark | Health Hazard | Environment |

Pictograms**HAZARD STATEMENTS:**

H303 + H313 May be harmful if swallowed or 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.
 H336 May cause drowsiness or dizziness.
 H370 Causes damage to organs: blood or blood-forming organs.
 H410 Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS**General:**

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.

Prevention:

P201 Obtain special instructions before use.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P271 Use only outdoors or in a well-ventilated area.
 P273 Avoid release to the environment.
 P280J Wear protective gloves, protective clothing, respiratory protection, eye protection, and face protection.

Response:

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P302 + P312 IF ON SKIN: Call a POISON CENTER or doctor/physician if you feel unwell.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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.
 P321 Specific treatment (see Notes to Physician on this label).
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

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

Notes to Physician:

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO₂ (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

2.3. Other hazards

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines. - May cause chemical gastrointestinal burns. All or part of the classification is based on toxicity test data.

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | CAS Nbr | % by Wt |
|---|------------|-----------|
| Polymeric Diamide | 68911-25-1 | 30 - 60 |
| Butadiene Acrylonitrile Copolymer | 68683-29-4 | 10 - 30 |
| Silica, vitreous | 60676-86-0 | 10 - 30 |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | < 10 |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | 90-72-2 | 5 - 10 |
| Dimethyl Siloxane, Reaction Product with Silica | 67762-90-7 | 1 - 5 |
| Amine Epoxy Curing Agent | 288-32-4 | 1 - 5 |
| Nitric acid, ammonium calcium salt | 15245-12-2 | 1 - 5 |
| Bis[(Dimethylamino)Methyl]Phenol | 71074-89-0 | 0.1 - 1.5 |
| N-Aminoethylpiperazine | 140-31-8 | 0.1 - 1 |
| Toluene | 108-88-3 | < 0.5 |

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 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

Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness). Target organ effects. See Section 11 for additional details.

4.3. Indication of any immediate medical attention and special treatment required

Overexposure to this product may result in methemoglobinemia. Methemoglobinemia may be clinically suspected by the presence of clinical "cyanosis" in the presence of a normal PaO₂ (as obtained by arterial blood gases). Routine pulse oximetry may be inaccurate for monitoring oxygen saturation in the presence of methemoglobinemia, and should not be used to make the diagnosis of this disorder. If the patient is symptomatic or if the methemoglobin level is >20%, specific therapy with methylene blue should be considered as part of the medical management.

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**

Carbon monoxide.
Carbon dioxide.

Condition

During combustion.
During combustion.

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use PPE - Exposure Assessment Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

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.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not use in a confined area with minimal air exchange. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/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 oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Store away from acids. Store away from oxidising agents.

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 | CAS Nbr | Agency | Limit type | Additional comments |
|------------|----------|--------|------------|---|
| Toluene | 108-88-3 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin, Ototoxicant |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

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/vapours/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. 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 (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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 vapours 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 | Liquid. |
| Specific Physical Form: | Viscous liquid |
| Color | Tan |
| Odor | Slight Amine |
| Odour threshold | <i>No data available.</i> |
| pH | <i>Not applicable.</i> |
| Melting point/Freezing point: NA | <i>Not applicable.</i> |
| Boiling point/Initial boiling point/Boiling range | >=110 °C |
| Flash point | 110 °C [<i>Test Method:Closed Cup</i>] |
| Evaporation rate | <=1 [<i>Ref Std:BUOAC=1</i>] |
| Flammability | <i>Not applicable.</i> |
| Flammable Limits(LEL) | <i>No data available.</i> |
| Flammable Limits(UEL) | <i>No data available.</i> |
| Vapour pressure | <=26,664.4 Pa [<i>@ 20 °C</i>] |
| Relative Vapor Density | <i>No data available.</i> |
| Density | 1.2 g/ml |
| Density | 1.2 kg/l |
| Relative density | 1.2 [<i>Ref Std:WATER=1</i>] |
| Water solubility | <i>No data available.</i> |
| Solubility- non-water | <i>No data available.</i> |
| Partition coefficient: n-octanol/water | <i>No data available.</i> |
| Autoignition temperature | <i>No data available.</i> |
| Decomposition temperature | <i>No data available.</i> |
| Kinematic Viscosity | 187,500 mm ² /sec |
| Volatile organic compounds (VOC) | 4 g/l [<i>Test Method:calculated SCAQMD rule 443.1</i>] |
| Volatile organic compounds (VOC) | 0.4 % weight [<i>Test Method:calculated per CARB title 2</i>] |
| Percent volatile | 0.4 % weight |
| VOC less H ₂ O & exempt solvents | 4 g/l [<i>Test Method:calculated SCAQMD rule 443.1</i>] |
| Molecular weight | <i>No data available.</i> |

| | |
|--------------------------|------------------------|
| Particle Characteristics | <i>Not applicable.</i> |
|--------------------------|------------------------|

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is considered to be non reactive under normal use conditions

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| 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 labelling, 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 localised 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 faeces and/or vomitus may also be seen. May cause additional health effects (see below).

Additional Health Effects:**Single exposure may cause target organ effects:**

Methemoglobinemia: Signs/symptoms may include headache, dizziness, nausea, difficulty breathing, and generalised weakness. Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Additional information:

Persons previously sensitised to amines may develop a cross-sensitisation reaction to certain other amines.

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 |
| Polymeric Diamide | Dermal | Rat | LD50 > 2,000 mg/kg |
| Polymeric Diamide | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Silica, vitreous | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Silica, vitreous | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Silica, vitreous | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Butadiene Acrylonitrile Copolymer | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Butadiene Acrylonitrile Copolymer | Ingestion | Rat | LD50 > 15,300 mg/kg |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Dermal | Rat | LD50 1,280 mg/kg |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Ingestion | Rat | LD50 1,000 mg/kg |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Dermal | Rabbit | LD50 2,525 mg/kg |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Ingestion | Rat | LD50 2,850 mg/kg |
| Dimethyl Siloxane, Reaction Product with Silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Dimethyl Siloxane, Reaction Product with Silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Dimethyl Siloxane, Reaction Product with Silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Amine Epoxy Curing Agent | Ingestion | Rat | LD50 970 mg/kg |
| Amine Epoxy Curing Agent | Dermal | similar compounds | LD50 400 mg/kg |
| Nitric acid, ammonium calcium salt | Ingestion | Rat | LD50 >300, <2000 mg/kg |
| Nitric acid, ammonium calcium salt | Dermal | similar compounds | LD50 > 2,000 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 |
|---|-------------------|---------------------------|
| Overall product | Rabbit | Corrosive |
| Polymeric Diamide | Rat | Irritant |
| Silica, vitreous | Rabbit | No significant irritation |
| Butadiene Acrylonitrile Copolymer | Rabbit | Irritant |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Rabbit | Corrosive |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Rabbit | Corrosive |
| Dimethyl Siloxane, Reaction Product with Silica | Rabbit | No significant irritation |
| Amine Epoxy Curing Agent | Rabbit | Corrosive |
| Nitric acid, ammonium calcium salt | similar compounds | No significant irritation |

| | | |
|----------------------------------|-------------------|-----------|
| Bis[(Dimethylamino)Methyl]Phenol | similar compounds | Corrosive |
| N-Aminoethylpiperazine | Rabbit | Corrosive |
| Toluene | Rabbit | Irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|------------------------|---------------------------|
| Overall product | similar health hazards | Corrosive |
| Polymeric Diamide | In vitro data | Severe irritant |
| Silica, vitreous | Rabbit | No significant irritation |
| Butadiene Acrylonitrile Copolymer | Rabbit | Mild irritant |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Rabbit | Corrosive |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Rabbit | Corrosive |
| Dimethyl Siloxane, Reaction Product with Silica | Rabbit | No significant irritation |
| Amine Epoxy Curing Agent | Rabbit | Corrosive |
| Nitric acid, ammonium calcium salt | Rabbit | Corrosive |
| Bis[(Dimethylamino)Methyl]Phenol | similar compounds | Corrosive |
| N-Aminoethylpiperazine | Rabbit | Corrosive |
| Toluene | Rabbit | Moderate irritant |

Sensitization:

Skin Sensitisation

| Name | Species | Value |
|---|------------------------|----------------|
| Overall product | Guinea pig | Sensitising |
| Polymeric Diamide | Guinea pig | Sensitising |
| Silica, vitreous | Human and animal | Not classified |
| Butadiene Acrylonitrile Copolymer | Guinea pig | Sensitising |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Guinea pig | Not classified |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Professional judgement | Sensitising |
| Dimethyl Siloxane, Reaction Product with Silica | Human and animal | Not classified |
| Nitric acid, ammonium calcium salt | Mouse | Not classified |
| N-Aminoethylpiperazine | Guinea pig | Sensitising |
| Toluene | Guinea pig | Not classified |

Respiratory Sensitisation

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

Germ Cell Mutagenicity

| Name | Route | Value |
|-------------------|----------|---------------|
| Polymeric Diamide | In Vitro | Not mutagenic |

| | | |
|---|----------|--|
| Silica, vitreous | In Vitro | Not mutagenic |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | In Vitro | Not mutagenic |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | In Vitro | Not mutagenic |
| Dimethyl Siloxane, Reaction Product with Silica | In Vitro | Not mutagenic |
| Amine Epoxy Curing Agent | In Vitro | Not mutagenic |
| Amine Epoxy Curing Agent | In vivo | Not mutagenic |
| Nitric acid, ammonium calcium salt | 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 |
|---|----------------|---------|--|
| Silica, vitreous | Not specified. | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Dimethyl Siloxane, Reaction Product with 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 |
|---|------------|--|---------|-----------------------|---------------------------|
| Polymeric Diamide | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | pre mating into lactation |
| Polymeric Diamide | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 29 days |
| Polymeric Diamide | Ingestion | Not classified for development | Rat | NOAEL 1,000 mg/kg/day | pre mating into lactation |
| Silica, vitreous | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Silica, vitreous | Inhalation | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Silica, vitreous | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Ingestion | Not classified for male reproduction | Rat | NOAEL 150 mg/kg/day | 2 generation |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Ingestion | Not classified for female reproduction | Rat | NOAEL 50 mg/kg/day | 2 generation |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Ingestion | Not classified for development | Rabbit | NOAEL 15 mg/kg/day | during gestation |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Ingestion | Not classified for female reproduction | Rat | NOAEL 600 mg/kg/day | pre mating into lactation |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Ingestion | Not classified for male reproduction | Rat | NOAEL 600 mg/kg/day | 59 days |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Ingestion | Not classified for development | Rat | NOAEL 600 mg/kg/day | pre mating into lactation |
| Dimethyl Siloxane, Reaction Product with Silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Dimethyl Siloxane, Reaction Product with Silica | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Dimethyl Siloxane, Reaction Product with Silica | Ingestion | Not classified for development | Rat | NOAEL 1,350 | during organogenesis |

| | | | | mg/kg/day | |
|--------------------------|------------|--|--------|---------------------|------------------------------|
| Amine Epoxy Curing Agent | Ingestion | Toxic to development | Rat | NOAEL 60 mg/kg/day | during organogenesis |
| N-Aminoethylpiperazine | Ingestion | Not classified for female reproduction | Rat | NOAEL 598 mg/kg/day | premating & during gestation |
| N-Aminoethylpiperazine | Ingestion | Not classified for male reproduction | Rat | NOAEL 409 mg/kg/day | 32 days |
| N-Aminoethylpiperazine | Ingestion | Toxic to development | Rabbit | NOAEL 75 mg/kg/day | during gestation |
| Toluene | Inhalation | Not classified for female reproduction | Human | NOAEL Not available | occupational exposure |
| Toluene | Inhalation | Not classified for male reproduction | 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 |
|---|------------|-----------------------------------|--|------------------------|---------------------|------------------------|
| Polymeric Diamide | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | Irritation Positive | |
| Polymeric Diamide | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Rat | NOAEL Not available | |
| Butadiene Acrylonitrile Copolymer | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL not available | |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Amine Epoxy Curing Agent | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Nitric acid, ammonium calcium salt | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| Nitric acid, ammonium calcium salt | Ingestion | methemoglobinemia | Causes damage to organs | similar compounds | 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 classification | Human | NOAEL Not available | |
| Toluene | Inhalation | immune system | Not classified | 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 |
|-------------------|-----------|--|----------------|---------|-----------------------|-------------------|
| Polymeric Diamide | Ingestion | heart skin endocrine system gastrointestinal tract | Not classified | Rat | NOAEL 1,000 mg/kg/day | 29 days |

| | | | | | | |
|---|------------|--|--|-------|------------------------------|-----------------------|
| | | bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system vascular system | | | | |
| Silica, vitreous | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Dermal | skin | Not classified | Rat | NOAEL 25 mg/kg/day | 4 weeks |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Dermal | liver nervous system auditory system hematopoietic system eyes | Not classified | Rat | NOAEL 125 mg/kg/day | 4 weeks |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Ingestion | heart endocrine system hematopoietic system liver muscles nervous system kidney and/or bladder respiratory system vascular system auditory system skin gastrointestinal tract bone, teeth, nails, and/or hair immune system eyes | Not classified | Rat | NOAEL 150 mg/kg/day | 90 days |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | Ingestion | gastrointestinal tract heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system vascular system | Not classified | Rat | NOAEL 600 mg/kg/day | 59 days |
| Dimethyl Siloxane, Reaction Product with Silica | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Amine Epoxy Curing Agent | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 60 mg/kg/day | 90 days |
| Amine Epoxy Curing Agent | Ingestion | heart liver blood nervous system eyes | Not classified | Rat | NOAEL 180 mg/kg/day | 90 days |
| N-Aminoethylpiperazine | Dermal | skin | Not classified | Rat | NOAEL 100 mg/kg/day | 29 days |
| N-Aminoethylpiperazine | Dermal | hematopoietic system nervous system kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 29 days |
| N-Aminoethylpiperazine | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | NOAEL 0.2 mg/m ³ | 13 weeks |
| N-Aminoethylpiperazine | Inhalation | hematopoietic system eyes kidney and/or | Not classified | Rat | NOAEL 53.8 mg/m ³ | 13 weeks |

| | | | | | | |
|------------------------|------------|--|--|-------------------------|-----------------------|------------------------|
| | | bladder | | | | |
| N-Aminoethylpiperazine | Ingestion | heart endocrine system hematopoietic system liver nervous system kidney and/or bladder | Not classified | 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 | Not classified | Rat | NOAEL 11.3 mg/l | 15 weeks |
| Toluene | Inhalation | endocrine system | Not classified | Rat | NOAEL 1.1 mg/l | 4 weeks |
| Toluene | Inhalation | immune system | Not classified | Mouse | NOAEL Not available | 20 days |
| Toluene | Inhalation | bone, teeth, nails, and/or hair | Not classified | Mouse | NOAEL 1.1 mg/l | 8 weeks |
| Toluene | Inhalation | hematopoietic system vascular system | Not classified | Human | NOAEL Not available | occupational exposure |
| Toluene | Inhalation | gastrointestinal tract | Not classified | Multiple animal species | NOAEL 11.3 mg/l | 15 weeks |
| 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 | Not classified | Rat | NOAEL 2,500 mg/kg/day | 13 weeks |
| Toluene | Ingestion | liver kidney and/or bladder | Not classified | Multiple animal species | NOAEL 2,500 mg/kg/day | 13 weeks |
| Toluene | Ingestion | hematopoietic system | Not classified | Mouse | NOAEL 600 mg/kg/day | 14 days |
| Toluene | Ingestion | endocrine system | Not classified | Mouse | NOAEL 105 mg/kg/day | 28 days |
| Toluene | Ingestion | immune system | Not classified | 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 labelling, 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 1: Very toxic to aquatic life.

Chronic aquatic hazard:

GHS Chronic 1: Very toxic to aquatic life with long lasting effects.

No product test data available.

| Material | CAS Nbr | Organism | Type | Exposure | Test endpoint | Test result |
|---|------------|------------------|---|------------|---------------|--------------|
| Polymeric Diamide | 68911-25-1 | Fathead minnow | Experimental | 96 hours | LL50 | 2.16 mg/l |
| Polymeric Diamide | 68911-25-1 | Green algae | Experimental | 72 hours | EL50 | 0.43 mg/l |
| Polymeric Diamide | 68911-25-1 | Water flea | Experimental | 48 hours | EL50 | 0.57 mg/l |
| Polymeric Diamide | 68911-25-1 | Green algae | Experimental | 72 hours | NOEL | 0.28 mg/l |
| Polymeric Diamide | 68911-25-1 | Activated sludge | Experimental | 3 hours | EC50 | 410.3 mg/l |
| Butadiene Acrylonitrile Copolymer | 68683-29-4 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Silica, vitreous | 60676-86-0 | Common Carp | Experimental | 72 hours | LC50 | >10,000 mg/l |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | Bacteria | Experimental | 17 hours | EC50 | 4,000 mg/l |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | Golden Orfe | Experimental | 96 hours | LC50 | >1,000 mg/l |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | Green algae | Experimental | 72 hours | EC50 | >500 mg/l |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | Water flea | Experimental | 48 hours | EC50 | 218.16 mg/l |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | Green algae | Experimental | 72 hours | EC10 | 5.4 mg/l |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | 90-72-2 | N/A | Experimental | 96 hours | LC50 | 718 mg/l |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | 90-72-2 | Common Carp | Experimental | 96 hours | LC50 | >100 mg/l |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | 90-72-2 | Green algae | Experimental | 72 hours | EC50 | 46.7 mg/l |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | 90-72-2 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | 90-72-2 | Green algae | Experimental | 72 hours | NOEC | 6.44 mg/l |
| Amine Epoxy Curing Agent | 288-32-4 | Green algae | Experimental | 72 hours | ErC50 | 133 mg/l |
| Amine Epoxy Curing Agent | 288-32-4 | Water flea | Experimental | 48 hours | EC50 | 341.5 mg/l |
| Amine Epoxy Curing Agent | 288-32-4 | Green algae | Experimental | 72 hours | NOEC | 25 mg/l |
| Amine Epoxy Curing Agent | 288-32-4 | Activated sludge | Experimental | 30 minutes | EC50 | >1,000 mg/l |
| Dimethyl Siloxane, Reaction Product with Silica | 67762-90-7 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Nitric acid, ammonium calcium salt | 15245-12-2 | Green algae | Experimental | 72 hours | EC50 | >100 mg/l |

| | | | | | | |
|------------------------------------|------------|------------------|---|----------|------|------------------------------|
| Nitric acid, ammonium calcium salt | 15245-12-2 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Nitric acid, ammonium calcium salt | 15245-12-2 | Fathead minnow | Estimated | 32 days | NOEC | 157 mg/l |
| Nitric acid, ammonium calcium salt | 15245-12-2 | Green algae | Experimental | 72 hours | NOEC | 100 mg/l |
| Bis[(Dimethylamino)Methyl]Phenol | 71074-89-0 | N/A | Data not available or insufficient for classification | N/A | N/A | NA |
| N-Aminoethylpiperazine | 140-31-8 | Bacteria | Experimental | 17 hours | EC10 | 100 mg/l |
| N-Aminoethylpiperazine | 140-31-8 | Golden Orfe | Experimental | 96 hours | LC50 | 368 mg/l |
| N-Aminoethylpiperazine | 140-31-8 | Green algae | Experimental | 72 hours | EC50 | >1,000 mg/l |
| N-Aminoethylpiperazine | 140-31-8 | Water flea | Experimental | 48 hours | EC50 | 58 mg/l |
| N-Aminoethylpiperazine | 140-31-8 | Green algae | Experimental | 72 hours | NOEC | 31 mg/l |
| Toluene | 108-88-3 | Coho Salmon | Experimental | 96 hours | LC50 | 5.5 mg/l |
| Toluene | 108-88-3 | Grass Shrimp | Experimental | 96 hours | LC50 | 9.5 mg/l |
| Toluene | 108-88-3 | Green algae | Experimental | 72 hours | EC50 | 12.5 mg/l |
| Toluene | 108-88-3 | Leopard frog | Experimental | 9 days | LC50 | 0.39 mg/l |
| Toluene | 108-88-3 | Pink Salmon | Experimental | 96 hours | LC50 | 6.41 mg/l |
| Toluene | 108-88-3 | Water flea | Experimental | 48 hours | EC50 | 3.78 mg/l |
| Toluene | 108-88-3 | Coho Salmon | Experimental | 40 days | NOEC | 1.39 mg/l |
| Toluene | 108-88-3 | Diatom | Experimental | 72 hours | NOEC | 10 mg/l |
| Toluene | 108-88-3 | Water flea | Experimental | 7 days | NOEC | 0.74 mg/l |
| Toluene | 108-88-3 | Activated sludge | Experimental | 12 hours | IC50 | 292 mg/l |
| Toluene | 108-88-3 | Bacteria | Experimental | 16 hours | NOEC | 29 mg/l |
| Toluene | 108-88-3 | Bacteria | Experimental | 24 hours | EC50 | 84 mg/l |
| Toluene | 108-88-3 | Redworm | Experimental | 28 days | LC50 | >150 mg per kg of bodyweight |
| Toluene | 108-88-3 | Soil microbes | Experimental | 28 days | NOEC | <26 mg/kg (Dry Weight) |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|------------|---------------------------------|----------|-------------------------------|-----------------------------------|-------------------------------------|
| Polymeric Diamide | 68911-25-1 | Experimental Biodegradation | 28 days | BOD | 0 %BOD/ThOD | OECD 301F - Manometric respirometry |
| Butadiene Acrylonitrile Copolymer | 68683-29-4 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Silica, vitreous | 60676-86-0 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | Experimental Biodegradation | 25 days | CO2 evolution | -8 %CO2 evolution/THCO2 evolution | OECD 301B - Modified sturm or CO2 |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | Estimated Photolysis | | Photolytic half-life (in air) | 2.96 hours (t 1/2) | |
| Tris(2,4,6- | 90-72-2 | Experimental | 28 days | BOD | 4 %BOD/ThOD | OECD 301D - Closed bottle |

| | | | | | | |
|---|------------|--|---------|--------------------------------|-----------------------------------|--------------------------------|
| Dimethylaminomonomethyl)Phenol | | Biodegradation | | | | test |
| Amine Epoxy Curing Agent | 288-32-4 | Experimental Biodegradation | 18 days | Dissolv. Organic Carbon Deplet | 98 %removal of DOC | OECD 301A - DOC Die Away Test |
| Amine Epoxy Curing Agent | 288-32-4 | Experimental Aquatic Inherent Biodegrad. | 8 days | CO2 evolution | 83 %removal of DOC | OECD 302B Zahn-Wellens/EVPA |
| Amine Epoxy Curing Agent | 288-32-4 | Experimental Biodegradation | 19 days | Percent degraded | 86 %removal of DOC | OECD 303A - Simulated Aerobic |
| Dimethyl Siloxane, Reaction Product with Silica | 67762-90-7 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Nitric acid, ammonium calcium salt | 15245-12-2 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Bis[(Dimethylamino)Methyl]Phenol | 71074-89-0 | Modeled Biodegradation | 28 days | BOD | 41 %CO2 evolution/THCO2 evolution | Catalogic™ |
| N-Aminoethylpiperazine | 140-31-8 | Experimental Biodegradation | 28 days | BOD | 0 %BOD/ThOD | OECD 301C - MITI test (I) |
| Toluene | 108-88-3 | Experimental Biodegradation | 20 days | BOD | 80 %BOD/ThOD | APHA Std Meth Water/Wastewater |
| Toluene | 108-88-3 | Experimental Photolysis | | Photolytic half-life (in air) | 5.2 days (t 1/2) | |

12.3 : Bioaccumulative potential

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|------------|---|----------|------------------------|-------------|---------------------------------|
| Polymeric Diamide | 68911-25-1 | Modeled Bioconcentration | | Bioaccumulation factor | 42 | Catalogic™ |
| Polymeric Diamide | 68911-25-1 | Modeled Bioconcentration | | Log Kow | 11.7 | Episuite™ |
| Butadiene Acrylonitrile Copolymer | 68683-29-4 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Silica, vitreous | 60676-86-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Bis(3-Aminopropyl) Ether of Diethylene Glycol | 4246-51-9 | Experimental Bioconcentration | | Log Kow | -1.25 | |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | 90-72-2 | Experimental Bioconcentration | | Log Kow | -0.66 | 830.7550 Part.Coeff Shake Flask |
| Amine Epoxy Curing Agent | 288-32-4 | Experimental Bioconcentration | | Log Kow | -0.02 | OECD 107 log Kow shke flsk mtd |
| Dimethyl Siloxane, Reaction Product with Silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Nitric acid, ammonium calcium salt | 15245-12-2 | Estimated Bioconcentration | | Log Kow | -3.1 | OECD 107 log Kow shke flsk mtd |
| Bis[(Dimethylamino)Methyl]Phenol | 71074-89-0 | Modeled Bioconcentration | | Log Kow | -2.34 | ACD/Labs ChemSketch™ |
| N-Aminoethylpiperazine | 140-31-8 | Experimental Bioconcentration | | Log Kow | 0.3 | |
| Toluene | 108-88-3 | Experimental BCF - Other | 72 hours | Bioaccumulation factor | 90 | |
| Toluene | 108-88-3 | Experimental Bioconcentration | | Log Kow | 2.73 | |

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 polymerised) 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. 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

Air Transport (IATA)Regulations

UN No UN3267

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL AND AMINE EPOXY CURING AGENT)

Hazard Classs/Division 8

Subsidiary Risk Not applicable

Packing Group: II

Marine Transport (IMDG)

UN No UN3267

Proper Shipping Name CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S. (BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL AND AMINE EPOXY CURING AGENT)

Hazard Classs/Division 8

Subsidiary Risk Not applicable

Packing Group: II

Environmental Hazards: Not applicable

SECTION 15: Regulatory information

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

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Applicable Environmental, Health and Safety Regulations

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

Hazardous Waste(Management , Handling & Transboundary) Rules, 2008

Hazardous Chemicals (Classification, Packaging and Labelling Draft Rules), 2011

Central Motor Vehicle Rules, 1989

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules
Toluene

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:
The product is classified as Toxic (Corrosive) as per MSIHC Rules, 1989.

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision information:

Section 1: Product name information was modified.
Section 02: GHS Precautionary - Notes to Physician information was added.
Section 2: Hazard - Other information was modified.
Label: GHS Classification information was modified.
Label: GHS Environmental Hazard Statements information was added.
Label: GHS Precautionary - General information was modified.
Label: GHS Precautionary - Prevention information was modified.
Label: GHS Precautionary - Response information was modified.
Label: GHS Target Organ Hazard Statement information was modified.
Label: Graphic information was modified.
Label: Signal Word information was modified.
Label: Symbol information was modified.
Section 2: Ingredient table information was modified.
Section 04: First Aid - Symptoms and Effects (GHS) information was added.
Section 04: Information on toxicological effects information was deleted.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 08: Personal Protection - Apron Statement information was added.
Section 8: Personal Protection - Skin/body information information was deleted.
Section 8: Skin protection - protective clothing information information was deleted.
Section 8: Skin protection - recommended gloves information information was modified.
Section 8: Skin protection - recommended gloves text information was added.
Section 8: Skin protection - recommended gloves text information was deleted.
Section 9: Density information information was modified.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Kinematic Viscosity information information was added.
Section 09: Particle Characteristics N/A information was added.
Section 09: Percent Volatile information was added.
Section 9: Property description for optional properties information was added.
Section 9: Property description for optional properties information was deleted.
Section 09: Vapor Density Value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Viscosity information information was deleted.

Section 09: VOC Less H₂O & Exempt Solvents information was added.
Section 09: Volatile Organic Compounds information was added.
Section 11: Acute Toxicity table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Acute aquatic hazard information information was modified.
Section 12: Chronic aquatic hazard information information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into India, you are responsible to comply with all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

3M India SDSs are available at <http://solutions.3mindia.co.in>



Safety Data Sheet

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Supersedes date: 30/05/2016

This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier

3M™ Panel Bonding Adhesive Part B PNs 08115, 38315, 38515, 58115

1.2. Recommended use and restrictions on use

Recommended use

Automotive., Structural Panel Bonding Adhesive

1.3. Supplier's details

Address: 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
Telephone: 080-45543000, contact Product EHS team
E Mail: productehs.in@mmm.com
Website: <http://solutions.3mindia.co.in>

1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture

Acute Toxicity (inhalation): Category 5.
Skin Corrosion/Irritation: Category 2.
Serious Eye Damage/Irritation: Category 2A
Skin Sensitizer: Category 1.
Germ Cell Mutagenicity: Category 2.
Carcinogenicity: Category 2.
Reproductive Toxicity: Category 1B.
Acute Aquatic Toxicity: Category 2.
Chronic Aquatic Toxicity: Category 2.

2.2. Label elements

Signal Word

Danger

Symbols

Exclamation mark | Health Hazard | Environment |

Pictograms



HAZARD STATEMENTS:

| | |
|------|--|
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H333 | May be harmful if inhaled. |
| H317 | May cause an allergic skin reaction. |
| H341 | Suspected of causing genetic defects. |
| H351 | Suspected of causing cancer. |
| H360 | May damage fertility or the unborn child. |
| H411 | Toxic to aquatic life with long lasting effects. |

PRECAUTIONARY STATEMENTS

General:

| | |
|------|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |

Prevention:

| | |
|-------|--|
| P201 | Obtain special instructions before use. |
| P273 | Avoid release to the environment. |
| P280K | Wear protective gloves and respiratory protection. |

Response:

| | |
|--------------------|--|
| P304 + P312 | IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308 + P313 | IF exposed or concerned: Get medical advice/attention. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P391 | Collect spillage. |

Storage:

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

Disposal:

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | CAS Nbr | % by Wt |
|---|--------------|-----------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | 25068-38-6 | 30 - 60 |
| Oxide Glass Chemicals | 65997-17-3 | 10 - 30 |
| Silica, vitreous | 60676-86-0 | 7 - 13 |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | 14228-73-0 | 7 - 13 |
| Acrylate Polymer | Trade Secret | 1 - 11 |
| Silicon dioxide | 7631-86-9 | 1 - 5 |
| Dimethyl Siloxane, Reaction Product With Silica | 67762-90-7 | 0.5 - 1.5 |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | 2530-83-8 | 0.5 - 1.5 |
| Carbon black | 1333-86-4 | < 0.5 |
| Toluene | 108-88-3 | < 0.3 |

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

Allergic skin reaction (redness, swelling, blistering, and itching).

4.3. 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.

5.3. Special protective actions for fire-fighters

When fire fighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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. Use PPE - Exposure Assessment

Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/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 oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from strong bases. Store away from oxidising agents. 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 | CAS Nbr | Agency | Limit type | Additional comments |
|-----------------------|------------|-------------------------|--|---|
| Toluene | 108-88-3 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin, Ototoxicant |
| Carbon black | 1333-86-4 | ACGIH | TWA(inhalable fraction):3 mg/m ³ | A3: Confirmed animal carcin. |
| Oxide Glass Chemicals | 65997-17-3 | Manufacturer determined | TWA(as non-fibrous, respirable)(8 hours):3 mg/m ³ ; TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m ³ | |
| SPECIAL PURPOSE GLASS | 65997-17-3 | ACGIH | TWA(as fiber):1 fiber/cc | A3: Confirmed animal |

| | | | | |
|--------|--|--|--|---------|
| FIBERS | | | | carcin. |
|--------|--|--|--|---------|

ACGIH : American Conference of Governmental Industrial Hygienists
 AIHA : American Industrial Hygiene Association
 CMRG : Chemical Manufacturer's Recommended Guidelines
 TWA: Time-Weighted-Average
 STEL: Short Term Exposure Limit
 CEIL: Ceiling

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/vapours/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:

Safety glasses with side shields.

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 (e.g., spraying, high splash potential, etc.), then use of a protective apron may be necessary. See recommended glove material(s) for determining appropriate apron material(s). If a glove material is not available as an apron, polymer laminate is a suitable option.

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 vapours and particulates

Half facepiece or full facepiece supplied-air respirator

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 | Liquid. |
| Color | Black |
| Odor | Mild Acrylic |
| Odour threshold | <i>No data available.</i> |
| pH | <i>No data available.</i> |
| Melting point/Freezing point: NA | <i>No data available.</i> |
| Boiling point/Initial boiling point/Boiling range | >= 35 °C |

| | |
|--|---|
| Flash point | >= 104.4 °C [Test Method:Closed Cup] |
| Evaporation rate | <= 1 Units not available or not applicable. [Ref Std:BUOAC=1] |
| Flammability | Not applicable. |
| Flammable Limits(LEL) | No data available. |
| Flammable Limits(UEL) | No data available. |
| Vapour pressure | <= 186,158.4 Pa |
| Relative Vapor Density | No data available. |
| Density | 1 kg/l |
| Density | 0.96 g/ml |
| Relative density | 0.96 [Ref Std:WATER=1] |
| Water solubility | Negligible |
| Solubility- non-water | No data available. |
| Partition coefficient: n-octanol/water | No data available. |
| Autoignition temperature | No data available. |
| Decomposition temperature | No data available. |
| Kinematic Viscosity | 83,333 mm ² /sec |
| Volatile organic compounds (VOC) | 15 g/l [Test Method:calculated SCAQMD rule 443.1] |
| Volatile organic compounds (VOC) | 1.6 % weight [Test Method:calculated per CARB title 2] |
| Percent volatile | 1.6 % weight |
| VOC less H₂O & exempt solvents | 15 g/l [Test Method:calculated SCAQMD rule 443.1] |
| Molecular weight | No data available. |

| | |
|---------------------------------|------------------------|
| Particle Characteristics | <i>Not applicable.</i> |
|---------------------------------|------------------------|

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 polymerisation will not occur.

10.4 Conditions to avoid

Sparks and/or flames.

10.5 Incompatible materials

Amines.

Strong acids.

Strong bases.

Strong oxidising agents.

10.6 Hazardous decomposition products

Substance

Aldehydes.

Carbon monoxide.

Carbon dioxide.

Hydrogen Chloride

Condition

Not specified.

Not specified.

Not specified.

Not specified.

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 labelling, 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

May be harmful if inhaled. 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

Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain. 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 diarrhoea. 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.

Genotoxicity:

Genotoxicity and Mutagenicity: May interact with genetic material and possibly alter gene expression.

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 >5 - =12.5 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Dermal | Rat | LD50 > 1,600 mg/kg |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Ingestion | Rat | LD50 > 1,000 mg/kg |
| Oxide Glass Chemicals | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Oxide Glass Chemicals | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Silica, vitreous | Dermal | Rabbit | LD50 > 5,000 mg/kg |

| | | | |
|---|--------------------------------|--------|--------------------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | Ingestion | Rat | LD50 1,000 mg/kg |
| Silica, vitreous | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Silica, vitreous | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Acrylate Polymer | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Acrylate Polymer | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Silicon dioxide | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Silicon dioxide | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Silicon dioxide | Ingestion | Rat | LD50 > 5,110 mg/kg |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Dermal | Rabbit | LD50 4,000 mg/kg |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.3 mg/l |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Ingestion | Rat | LD50 7,010 mg/kg |
| Dimethyl Siloxane, Reaction Product With Silica | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Dimethyl Siloxane, Reaction Product With Silica | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| Dimethyl Siloxane, Reaction Product With Silica | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Carbon black | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| Carbon black | Ingestion | Rat | LD50 > 8,000 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 |
|---|------------------------|---------------------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Rabbit | Mild irritant |
| Oxide Glass Chemicals | Professional judgement | No significant irritation |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | In vitro data | Irritant |
| Silica, vitreous | Rabbit | No significant irritation |
| Acrylate Polymer | Professional judgement | Minimal irritation |
| Silicon dioxide | Rabbit | No significant irritation |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Rabbit | Mild irritant |
| Dimethyl Siloxane, Reaction Product With Silica | Rabbit | No significant irritation |
| Carbon black | Rabbit | No significant irritation |
| Toluene | Rabbit | Irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|------------------------|---------------------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Rabbit | Moderate irritant |
| Oxide Glass Chemicals | Professional judgement | No significant irritation |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | In vitro data | No significant irritation |
| Silica, vitreous | Rabbit | No significant irritation |
| Acrylate Polymer | Professional | Mild irritant |

| | judge ment | |
|---|---------------|---------------------------|
| Silicon dioxide | Rabbit | No significant irritation |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Rabbit | Corrosive |
| Dimethyl Siloxane, Reaction Product With Silica | Rabbit | No significant irritation |
| Carbon black | Rabbit | No significant irritation |
| Toluene | Rabbit | Moderate irritant |

Sensitization:

Skin Sensitisation

| Name | Species | Value |
|---|-------------------|----------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Human and animal | Sensitising |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | similar compounds | Sensitising |
| Silica, vitreous | Human and animal | Not classified |
| Silicon dioxide | Human and animal | Not classified |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Guinea pig | Not classified |
| Dimethyl Siloxane, Reaction Product With Silica | Human and animal | Not classified |
| Toluene | Guinea pig | Not classified |

Respiratory Sensitisation

| Name | Species | Value |
|---|---------|----------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Human | Not classified |

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|--|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | In vivo | Not mutagenic |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Oxide Glass Chemicals | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | In Vitro | Mutagenic; structurally related to germ cell mutagens |
| Silica, vitreous | In Vitro | Not mutagenic |
| Silicon dioxide | In Vitro | Not mutagenic |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | In vivo | Some positive data exist, but the data are not sufficient for classification |
| Dimethyl Siloxane, Reaction Product With Silica | In Vitro | Not mutagenic |
| Carbon black | In Vitro | Not mutagenic |
| Carbon black | In vivo | 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 |
|---|--------|---------|--|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Dermal | Mouse | Some positive data exist, but the data are not |

| | | | | |
|---|----------------|-------------------------|--|--|
| | | | | sufficient for classification |
| Oxide Glass Chemicals | Inhalation | Multiple animal species | | Some positive data exist, but the data are not sufficient for classification |
| Silica, vitreous | Not specified. | Mouse | | Some positive data exist, but the data are not sufficient for classification |
| Silicon dioxide | Not specified. | Mouse | | Some positive data exist, but the data are not sufficient for classification |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Dermal | Mouse | | Not carcinogenic |
| Dimethyl Siloxane, Reaction Product With Silica | Not specified. | Mouse | | Some positive data exist, but the data are not sufficient for classification |
| Carbon black | Dermal | Mouse | | Not carcinogenic |
| Carbon black | Ingestion | Mouse | | Not carcinogenic |
| Carbon black | Inhalation | Rat | | Carcinogenic. |
| 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 |
|---|------------|--|---------|-----------------------|-----------------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Ingestion | Not classified for female reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Ingestion | Not classified for male reproduction | Rat | NOAEL 750 mg/kg/day | 2 generation |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Dermal | Not classified for development | Rabbit | NOAEL 300 mg/kg/day | during organogenesis |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Silica, vitreous | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Silica, vitreous | Inhalation | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Silica, vitreous | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| Silicon dioxide | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Silicon dioxide | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Silicon dioxide | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Ingestion | Not classified for development | Rat | NOAEL 3,000 mg/kg/day | during organogenesis |
| Dimethyl Siloxane, Reaction Product With Silica | Ingestion | Not classified for female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| Dimethyl Siloxane, Reaction Product With Silica | Ingestion | Not classified for male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| Dimethyl Siloxane, Reaction Product With Silica | Ingestion | Not classified for development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| Toluene | Inhalation | Not classified for female reproduction | Human | NOAEL Not available | occupational exposure |

| | | | | | |
|---------|------------|--------------------------------------|-------|---------------------|------------------------|
| Toluene | Inhalation | Not classified for male reproduction | 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 |
|--|------------|-----------------------------------|--|------------------------|---------------------|------------------------|
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | 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 classification | Human | NOAEL Not available | |
| Toluene | Inhalation | immune system | Not classified | 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 |
|---|------------|---|--|---------|-----------------------|------------------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Dermal | liver | Not classified | Rat | NOAEL 1,000 mg/kg/day | 2 years |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Dermal | nervous system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 13 weeks |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Ingestion | auditory system heart endocrine system hematopoietic system liver eyes kidney and/or bladder | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| Oxide Glass Chemicals | Inhalation | respiratory system | Not classified | Human | NOAEL not available | occupational exposure |
| Silica, vitreous | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Silicon dioxide | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | Ingestion | heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |
| Dimethyl Siloxane, Reaction Product With Silica | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Carbon black | Inhalation | pneumoconiosis | Not classified | Human | NOAEL Not available | occupational exposure |
| 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 | Not classified | Rat | NOAEL 11.3 mg/l | 15 weeks |
| Toluene | Inhalation | endocrine system | Not classified | Rat | NOAEL 1.1 mg/l | 4 weeks |
| Toluene | Inhalation | immune system | Not classified | Mouse | NOAEL Not available | 20 days |
| Toluene | Inhalation | bone, teeth, nails, and/or hair | Not classified | Mouse | NOAEL 1.1 mg/l | 8 weeks |
| Toluene | Inhalation | hematopoietic system vascular system | Not classified | Human | NOAEL Not available | occupational exposure |
| Toluene | Inhalation | gastrointestinal tract | Not classified | Multiple animal species | NOAEL 11.3 mg/l | 15 weeks |
| 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 | Not classified | Rat | NOAEL 2,500 mg/kg/day | 13 weeks |
| Toluene | Ingestion | liver kidney and/or bladder | Not classified | Multiple animal species | NOAEL 2,500 mg/kg/day | 13 weeks |
| Toluene | Ingestion | hematopoietic system | Not classified | Mouse | NOAEL 600 mg/kg/day | 14 days |
| Toluene | Ingestion | endocrine system | Not classified | Mouse | NOAEL 105 mg/kg/day | 28 days |
| Toluene | Ingestion | immune system | Not classified | 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 labelling, 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 2: Toxic to aquatic life with long lasting effects.

No product test data available.

| Material | CAS Nbr | Organism | Type | Exposure | Test endpoint | Test result |
|-------------------------------|------------|------------------|-----------|----------|---------------|-------------|
| 4,4'-isopropylidenediph enol- | 25068-38-6 | Activated sludge | Estimated | 3 hours | IC50 | >100 mg/l |

| | | | | | | |
|--|--------------|---------------|---|----------|-------|--------------|
| epichlorohydrin polymer | | | | | | |
| 4,4'-isopropylidenediph enol-epichlorohydrin polymer | 25068-38-6 | Green algae | Estimated | 72 hours | EC50 | >11 mg/l |
| 4,4'-isopropylidenediph enol-epichlorohydrin polymer | 25068-38-6 | Rainbow trout | Estimated | 96 hours | LC50 | 2 mg/l |
| 4,4'-isopropylidenediph enol-epichlorohydrin polymer | 25068-38-6 | Water flea | Estimated | 48 hours | EC50 | 1.8 mg/l |
| 4,4'-isopropylidenediph enol-epichlorohydrin polymer | 25068-38-6 | Green algae | Estimated | 72 hours | NOEC | 4.2 mg/l |
| 4,4'-isopropylidenediph enol-epichlorohydrin polymer | 25068-38-6 | Water flea | Estimated | 21 days | NOEC | 0.3 mg/l |
| Oxide Glass Chemicals | 65997-17-3 | Green algae | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Oxide Glass Chemicals | 65997-17-3 | Water flea | Experimental | 72 hours | EC50 | >1,000 mg/l |
| Oxide Glass Chemicals | 65997-17-3 | Zebra Fish | Experimental | 96 hours | LC50 | >1,000 mg/l |
| Oxide Glass Chemicals | 65997-17-3 | Green algae | Experimental | 72 hours | NOEC | >=1,000 mg/l |
| 1,4-Bis[(2,3-epoxypropoxy)met hyl]cyclohexane | 14228-73-0 | Bacteria | Estimated | 18 hours | EC50 | 10,264 mg/l |
| 1,4-Bis[(2,3-epoxypropoxy)met hyl]cyclohexane | 14228-73-0 | N/A | Experimental | 72 hours | EC50 | 38 mg/l |
| 1,4-Bis[(2,3-epoxypropoxy)met hyl]cyclohexane | 14228-73-0 | Water flea | Experimental | 48 hours | EC50 | 71 mg/l |
| 1,4-Bis[(2,3-epoxypropoxy)met hyl]cyclohexane | 14228-73-0 | N/A | Experimental | 72 hours | EC10 | 18 mg/l |
| Silica, vitreous | 60676-86-0 | Common Carp | Experimental | 72 hours | LC50 | >10,000 mg/l |
| Acrylate Polymer | Trade Secret | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Silicon dioxide | 7631-86-9 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| [3-(2,3-epoxypropoxy)prop yl]trimethoxysilane | 2530-83-8 | Common Carp | Experimental | 96 hours | LC50 | 55 mg/l |
| [3-(2,3-epoxypropoxy)prop yl]trimethoxysilane | 2530-83-8 | Green algae | Experimental | 96 hours | ErC50 | 350 mg/l |
| [3-(2,3-epoxypropoxy)prop yl]trimethoxysilane | 2530-83-8 | Invertebrate | Experimental | 48 hours | LC50 | 324 mg/l |
| [3-(2,3-epoxypropoxy)prop yl]trimethoxysilane | 2530-83-8 | Green algae | Experimental | 96 hours | NOEC | 130 mg/l |
| [3-(2,3-epoxypropoxy)prop yl]trimethoxysilane | 2530-83-8 | Water flea | Experimental | 21 days | NOEC | 100 mg/l |

| | | | | | | |
|---|------------|------------------|---|----------|--------------------------------|------------------------------|
| yl]trimethoxsilane | | | | | | |
| [3-(2,3-epoxypropoxy)propyl]trimethoxsilane | 2530-83-8 | Activated sludge | Experimental | 3 hours | EC50 | >100 mg/l |
| Dimethyl Siloxane, Reaction Product With Silica | 67762-90-7 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Carbon black | 1333-86-4 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | >100 mg/l |
| Carbon black | 1333-86-4 | Zebra Fish | Experimental | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Carbon black | 1333-86-4 | Green algae | Experimental | 72 hours | No tox obs at lmt of water sol | 100 mg/l |
| Carbon black | 1333-86-4 | Activated sludge | Experimental | 3 hours | NOEC | >800 mg/l |
| Toluene | 108-88-3 | Coho Salmon | Experimental | 96 hours | LC50 | 5.5 mg/l |
| Toluene | 108-88-3 | Grass Shrimp | Experimental | 96 hours | LC50 | 9.5 mg/l |
| Toluene | 108-88-3 | Green algae | Experimental | 72 hours | EC50 | 12.5 mg/l |
| Toluene | 108-88-3 | Leopard frog | Experimental | 9 days | LC50 | 0.39 mg/l |
| Toluene | 108-88-3 | Pink Salmon | Experimental | 96 hours | LC50 | 6.41 mg/l |
| Toluene | 108-88-3 | Water flea | Experimental | 48 hours | EC50 | 3.78 mg/l |
| Toluene | 108-88-3 | Coho Salmon | Experimental | 40 days | NOEC | 1.39 mg/l |
| Toluene | 108-88-3 | Diatom | Experimental | 72 hours | NOEC | 10 mg/l |
| Toluene | 108-88-3 | Water flea | Experimental | 7 days | NOEC | 0.74 mg/l |
| Toluene | 108-88-3 | Activated sludge | Experimental | 12 hours | IC50 | 292 mg/l |
| Toluene | 108-88-3 | Bacteria | Experimental | 16 hours | NOEC | 29 mg/l |
| Toluene | 108-88-3 | Bacteria | Experimental | 24 hours | EC50 | 84 mg/l |
| Toluene | 108-88-3 | Redworm | Experimental | 28 days | LC50 | >150 mg per kg of bodyweight |
| Toluene | 108-88-3 | Soil microbes | Experimental | 28 days | NOEC | <26 mg/kg (Dry Weight) |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|--|--------------|---------------------------------|----------|--------------------------------|------------------------------------|-------------------------------------|
| 4,4'-isopropylidenediph enol-epichlorohydrin polymer | 25068-38-6 | Estimated Biodegradation | 28 days | BOD | 5 %BOD/COD | OECD 301F - Manometric respirometry |
| 4,4'-isopropylidenediph enol-epichlorohydrin polymer | 25068-38-6 | Estimated Hydrolysis | | Hydrolytic half-life | 117 hours (t 1/2) | |
| Oxide Glass Chemicals | 65997-17-3 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| 1,4-Bis[(2,3-epoxypropoxy)methyl]cyclohexane | 14228-73-0 | Experimental Biodegradation | 28 days | CO2 evolution | 1.3 %CO2 evolution/THCO2 evolution | OECD 301B - Modified sturm or CO2 |
| Silica, vitreous | 60676-86-0 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Acrylate Polymer | Trade Secret | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Silicon dioxide | 7631-86-9 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| [3-(2,3-epoxypropoxy)propyl]trimethoxsilane | 2530-83-8 | Experimental Biodegradation | 28 days | Dissolv. Organic Carbon Deplet | 37 %removal of DOC | EC C.4.A. DOC Die-Away Test |
| [3-(2,3- | 2530-83-8 | Experimental | | Hydrolytic half-life | 6.5 hours (t 1/2) | OECD 111 Hydrolysis func |

| | | | | | | |
|---|------------|---------------------------------|---------|-------------------------------|------------------|--------------------------------|
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | | Hydrolysis | | (pH 7) | | of pH |
| Dimethyl Siloxane, Reaction Product With Silica | 67762-90-7 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Carbon black | 1333-86-4 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Toluene | 108-88-3 | Experimental Biodegradation | 20 days | BOD | 80 %BOD/ThOD | APHA Std Meth Water/Wastewater |
| Toluene | 108-88-3 | Experimental Photolysis | | Photolytic half-life (in air) | 5.2 days (t 1/2) | |

12.3 : Bioaccumulative potential

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|--------------|---|----------|------------------------|-------------|-----------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | 25068-38-6 | Estimated Bioconcentration | | Log Kow | 3.242 | |
| Oxide Glass Chemicals | 65997-17-3 | 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 | Experimental Bioconcentration | | Log Kow | 2.05 | |
| Silica, vitreous | 60676-86-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Acrylate Polymer | Trade Secret | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Silicon dioxide | 7631-86-9 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | 2530-83-8 | Experimental Bioconcentration | | Log Kow | 0.5 | Episuite™ |
| Dimethyl Siloxane, Reaction Product With Silica | 67762-90-7 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Carbon black | 1333-86-4 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Toluene | 108-88-3 | Experimental BCF - Other | 72 hours | Bioaccumulation factor | 90 | |
| Toluene | 108-88-3 | Experimental Bioconcentration | | Log Kow | 2.73 | |

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 waste product in a permitted industrial waste facility. As a disposal alternative, incinerate 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

Air Transport (IATA)Regulations

UN No UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains epoxy resin)

Hazard Classs/Division 9

Subsidiary Risk Not applicable

Packing Group: III

Marine Transport (IMDG)

UN No UN3082

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains epoxy resin)

Hazard Classs/Division 9

Subsidiary Risk Not applicable

Packing Group: III

Environmental Hazards: Not applicable

SECTION 15: Regulatory information

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

Global inventory status

Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Japan Industrial Safety and Health Law. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Applicable Environmental, Health and Safety Regulations

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules

Toluene

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:

The product is classified as Non-hazardous as per MSIHC Rules,1989.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision information:

Section 14: Packing group (IMO) information was added.
Company Telephone information was modified.
Section 1: Emergency telephone information was modified.
Section 1: Product name information was modified.
Label: GHS Classification information was modified.
Label: GHS Environmental Hazard Statements information was modified.
Label: GHS Precautionary - General information was modified.
Label: GHS Precautionary - Prevention information was modified.
Label: GHS Precautionary - Response information was modified.
Label: Graphic information was modified.
Label: Signal Word information was modified.
Label: Symbol information was modified.
Section 2: Ingredient table information was modified.
Section 04: First Aid - Symptoms and Effects (GHS) information was added.
Section 04: Information on toxicological effects information was deleted.
Section 5: Fire - Advice for fire fighters information information was modified.
Section 6: Accidental release clean-up information information was modified.
Section 6: Accidental release personal information information was modified.
Section 7: Conditions safe storage information was modified.
Section 7: Precautions safe handling information information was modified.
Section 8: Eye/face protection information information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 08: Personal Protection - Apron Statement information was added.
Section 8: Personal Protection - Skin/body information information was deleted.
Section 8: Respiratory protection - recommended respirators information information was modified.
Section 8: Skin protection - protective clothing information information was deleted.
Section 8: Skin protection - recommended gloves information information was modified.
Section 8: Skin protection - recommended gloves text information was added.
Section 8: Skin protection - recommended gloves text information was deleted.
Section 09: Color information was added.
Section 9: Density information information was modified.
Section 9: Flammability (solid, gas) information information was deleted.
Section 09: Flammability information information was added.
Section 09: Kinematic Viscosity information information was added.
Section 09: Odor information was added.
Sections 3 and 9: Odour, colour, grade information information was deleted.
Section 09: Particle Characteristics N/A information was added.
Section 09: Percent Volatile information was added.
Section 9: Property description for optional properties information was added.
Section 9: Property description for optional properties information was deleted.
Section 9: Relative density information information was modified.
Section 09: Vapor Density Value information was added.
Section 9: Vapour density value information was deleted.
Section 9: Vapour pressure value information was modified.

Section 9: Viscosity information information was deleted.
Section 09: VOC Less H2O & Exempt Solvents information was added.
Section 09: Volatile Organic Compounds information was added.
Section 10: Hazardous decomposition or by-products table information was modified.
Section 11: Acute Toxicity table information was modified.
Section 11: Aspiration Hazard Table information was added.
Section 11: Aspiration Hazard text information was deleted.
Section 11: Carcinogenicity Table information was modified.
Section 11: Germ Cell Mutagenicity Table information was modified.
Section 11: Health Effects - Ingestion information information was modified.
Section 11: Health Effects - Inhalation information information was modified.
Section 11: Health Effects - Skin information information was modified.
Section 11: Mutagenicity information information was added.
Section 11: Reproductive Hazards information information was added.
Section 11: Reproductive Toxicity Table information was modified.
Section 11: Respiratory Sensitization Table information was modified.
Section 11: Serious Eye Damage/Irritation Table information was modified.
Section 11: Skin Corrosion/Irritation Table information was modified.
Section 11: Skin Sensitization Table information was modified.
Section 11: Target Organs - Repeated Table information was modified.
Section 11: Target Organs - Single Table information was modified.
Section 12: Chronic aquatic hazard information information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 13: 13.1. Waste disposal note information was modified.
Section 13: Standard Phrase Category Waste GHS information was modified.
Section 14: Environmental hazards information was added.
Section 14: IATA transport hazard classes information was modified.
Section 14: IMO Subsidiary Risk information was added.
Section 14: IMO transport hazard classes information was added.
Section 14: Packing group (IATA) information was modified.
Section 14: Proper Shipping Name (IATA) information was modified.
Section 14: Proper Shipping Name (IMO) information was added.
Section 14: Proper Shipping Name n.o.s. ingredients information was added.
Section 14: Transportation Information information was deleted.
Section 14: UN Number (IATA) information was modified.
Section 14: UN Number (IMO) information was added.
Section 15: Applicable Environmental, Health and Safety Regulations information was modified.
Section 15: MSIHC Ingredients information was modified.
Section 15: MSIHC Part I of Schedule I ingredients information was modified.
Section 15: Regulations - Inventories information was modified.
Section 16: UK disclaimer information was deleted.

DISCLAIMER: The information in this Safety Data Sheet (SDS) 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 SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into India, you are responsible to comply with all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

3M India SDSs are available at <http://solutions.3mindia.co.in>