



## Safety Data Sheet

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 19-0738-5 | <b>Version Number:</b>  | 5.00     |
| <b>Issue Date:</b>     | 07/06/21  | <b>Supersedes Date:</b> | 10/26/16 |

### Product identifier

3M™ Panel Bonding Adhesive, PN 08116

### ID Number(s):

41-0003-6679-3, 41-0003-8017-4, 41-3701-2169-5, 60-9801-0901-5

7000045775

### Recommended use

Automotive, A two-part structural adhesive used to bond steel or aluminum auto body panels.

### Supplier's details

|                      |                                         |
|----------------------|-----------------------------------------|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Automotive Aftermarket                  |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 1-888-3M HELPS (1-888-364-3577)         |

### Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

**This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:**

19-0736-9, 34-3781-1

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**Document Group:** 34-3781-1  
**Issue Date:** 07/06/21

**Version Number:** 2.00  
**Supersedes Date:** 06/11/19

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Panel Bonding Adhesive 08116 (Base) Part B

#### Product Identification Numbers

LB-K100-1679-5

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Automotive, Panel Bonding Adhesive

#### 1.3. Supplier's details

**MANUFACTURER:** 3M  
**DIVISION:** Automotive Aftermarket  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA  
**Telephone:** 1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

#### 2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2A.  
Skin Corrosion/Irritation: Category 2.  
Skin Sensitizer: Category 1.  
Reproductive Toxicity: Category 1B.  
Carcinogenicity: Category 2.  
Germ Cell Mutagenicity: Category 2.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Exclamation mark | Health Hazard |

**Pictograms****Hazard Statements**

Causes serious eye irritation.

Causes skin irritation.

May cause an allergic skin reaction.

May damage fertility or the unborn child.

Suspected of causing cancer.

Suspected of causing genetic defects.

**Precautionary Statements****General:**

Keep out of reach of children.

**Prevention:**

Obtain special instructions before use.

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

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves and eye/face protection.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

**Response:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

IF exposed or concerned: Get medical advice/attention.

**Storage:**

Store locked up.

**Disposal:**

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

2% of the mixture consists of ingredients of unknown acute oral toxicity.

13% of the mixture consists of ingredients of unknown acute dermal toxicity.

**SECTION 3: Composition/information on ingredients**

| Ingredient                                          | C.A.S. No.    | % by Wt                |
|-----------------------------------------------------|---------------|------------------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | 25068-38-6    | 30 - 60 Trade Secret * |
| GLASS BEADS                                         | Trade Secret* | 10 - 30 Trade Secret * |
| ACRYLATE POLYMER                                    | Trade Secret* | < 15 Trade Secret *    |
| 1,4-BIS[(2,3-EPOXYPROPOXY)METHYL]CYCLOHEXANE        | 14228-73-0    | 7 - 13 Trade Secret *  |

|                                          |               |                          |
|------------------------------------------|---------------|--------------------------|
| FUSED SILICA                             | 60676-86-0    | 7 - 13 Trade Secret *    |
| GLASS                                    | Trade Secret* | 3 - 7 Trade Secret *     |
| SILICA                                   | Trade Secret* | 1 - 5 Trade Secret *     |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER | 2530-83-8     | 0.5 - 1.5 Trade Secret * |
| CARBON BLACK                             | 1333-86-4     | 0.1 - 1 Trade Secret *   |
| Toluene                                  | 108-88-3      | < 0.2 Trade Secret *     |

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

## 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

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

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

### 6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes 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 authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

### 7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

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

| Ingredient              | C.A.S. No.   | Agency | Limit type                                                                                                                                                                                    | Additional Comments                         |
|-------------------------|--------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Toluene                 | 108-88-3     | ACGIH  | TWA:20 ppm                                                                                                                                                                                    | A4: Not class. as human carcin, Ototoxicant |
| Toluene                 | 108-88-3     | OSHA   | TWA:200 ppm;CEIL:300 ppm                                                                                                                                                                      |                                             |
| CARBON BLACK            | 1333-86-4    | ACGIH  | TWA(inhalable fraction):3 mg/m3                                                                                                                                                               | A3: Confirmed animal carcin.                |
| CARBON BLACK            | 1333-86-4    | OSHA   | TWA:3.5 mg/m3                                                                                                                                                                                 |                                             |
| DUST, INERT OR NUISANCE | 60676-86-0   | OSHA   | TWA(as total dust):15 mg/m3;TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m3);TWA(respirable fraction):5 mg/m3;TWA(respirable fraction):15 millions of particles/cu. ft.(5 mg/m3) |                                             |
| SILICA, AMORPHOUS       | 60676-86-0   | OSHA   | TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3                                                                                                                              |                                             |
| GLASS                   | Trade Secret | OSHA   | TWA(as total dust):15 mg/m3;TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m3);TWA(respirable fraction):5 mg/m3;TWA(respirable                                                     |                                             |

|             |              |                         |                                                                                                                                                                                               |                                |
|-------------|--------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
|             |              |                         | fraction):15 millions of particles/cu. ft.(5 mg/m3)                                                                                                                                           |                                |
| GLASS       | Trade Secret | OSHA                    | TWA(respirable fraction):5 mg/m3                                                                                                                                                              |                                |
| GLASS BEADS | Trade Secret | Manufacturer determined | TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3                                                                                    |                                |
| GLASS BEADS | Trade Secret | ACGIH                   | TWA(as fiber):0.2 fiber/cc                                                                                                                                                                    | A2: Suspected human carcin.    |
| GLASS BEADS | Trade Secret | ACGIH                   | TWA(as fiber):1 fiber/cc                                                                                                                                                                      | A3: Confirmed animal carcin.   |
| GLASS BEADS | Trade Secret | ACGIH                   | TWA(as fiber):1 fiber/cc                                                                                                                                                                      | A4: Not class. as human carcin |
| GLASS BEADS | Trade Secret | ACGIH                   | TWA(inhalable fraction):5 mg/m3                                                                                                                                                               | A4: Not class. as human carcin |
| SILICA      | Trade Secret | OSHA                    | TWA(as total dust):15 mg/m3;TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m3);TWA(respirable fraction):5 mg/m3;TWA(respirable fraction):15 millions of particles/cu. ft.(5 mg/m3) |                                |
| SILICA      | Trade Secret | OSHA                    | TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3                                                                                                                              |                                |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

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/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Indirect Vented Goggles

#### Skin/hand protection

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

Gloves made from the following material(s) are recommended: Polymer laminate

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

### Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors and particulates

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

## SECTION 9: Physical and chemical properties

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

#### Appearance

##### Physical state

Liquid

##### Color

Black

#### Specific Physical Form:

Viscous

#### Odor

Characteristic Odor

#### Odor threshold

No Data Available

#### pH

Not Applicable

#### Melting point

Not Applicable

#### Boiling Point

> 300 °F

#### Flash Point

Flash point > 93 °C (200 °F)

#### Evaporation rate

< 1 [Ref Std:BUOAC=1]

#### Flammability (solid, gas)

Not Applicable

#### Flammable Limits(LEL)

No Data Available

#### Flammable Limits(UEL)

No Data Available

#### Vapor Pressure

< 5 mmHg [@ 20 °C]

#### Vapor Density

No Data Available

#### Density

1.2 g/ml

#### Specific Gravity

1.2 [Ref Std:WATER=1]

#### Solubility In Water

No Data Available

#### Solubility- non-water

No Data Available

#### Partition coefficient: n-octanol/ water

No Data Available

#### Autoignition temperature

No Data Available

#### Decomposition temperature

No Data Available

#### Viscosity

> 100,000 centipoise

#### Hazardous Air Pollutants

0.00000289 lb HAPS/lb solids [Test Method:Calculated]

#### Volatile Organic Compounds

1.4 % weight [Test Method:calculated per CARB title 2]

#### Volatile Organic Compounds

17 g/l [Test Method:calculated SCAQMD rule 443.1]

#### VOC Less H2O & Exempt Solvents

17 g/l [Test Method:calculated SCAQMD rule 443.1]

## 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 polymerization will not occur.

**10.4. Conditions to avoid**

None known.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

| <u>Substance</u>  | <u>Condition</u> |
|-------------------|------------------|
| Aldehydes         | Not Specified    |
| Carbon monoxide   | Not Specified    |
| Carbon dioxide    | Not Specified    |
| Hydrogen Chloride | 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 labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

**11.1. Information on Toxicological effects****Signs and Symptoms of Exposure**

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

**Inhalation:**

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

May cause additional health effects (see below).

**Skin Contact:**

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.

May cause additional health effects (see below).

**Eye Contact:**

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

**Ingestion:**

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

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.

| Ingredient   | CAS No.   | Class Description             | Regulation                                  |
|--------------|-----------|-------------------------------|---------------------------------------------|
| CARBON BLACK | 1333-86-4 | Grp. 2B: Possible human carc. | International Agency for Research on 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                                     | 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                             |
| GLASS BEADS                                         | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg             |
| GLASS BEADS                                         | Ingestion                      |                        | LD50 estimated to be 2,000 - 5,000 mg/kg       |
| FUSED SILICA                                        | Dermal                         | Rabbit                 | LD50 > 5,000 mg/kg                             |
| 1,4-BIS[(2,3-EPOXYPROPOXY)METHYL]CYCLOHEXANE        | Ingestion                      | Rat                    | LD50 1,000 mg/kg                               |
| FUSED SILICA                                        | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 0.691 mg/l                              |
| FUSED SILICA                                        | 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                             |
| GLASS                                               | Dermal                         | Professional judgement | LD50 estimated to be > 5,000 mg/kg             |
| GLASS                                               | Ingestion                      | Professional judgement | LD50 estimated to be > 5,000 mg/kg             |
| SILICA                                              | Dermal                         | Rabbit                 | LD50 > 5,000 mg/kg                             |
| SILICA                                              | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 0.691 mg/l                              |
| SILICA                                              | Ingestion                      | Rat                    | LD50 > 5,110 mg/kg                             |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER            | Dermal                         | Rabbit                 | LD50 4,000 mg/kg                               |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER            | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 5.3 mg/l                                |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER            | Ingestion                      | Rat                    | LD50 7,010 mg/kg                               |
| 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             |
| GLASS BEADS                                         | Professional judgement | No significant irritation |
| 1,4-BIS[(2,3-EPOXYPROPOXY)METHYL]CYCLOHEXANE        | In vitro data          | Irritant                  |
| FUSED SILICA                                        | Rabbit                 | No significant irritation |
| ACRYLATE POLYMER                                    | Professional judgement | Minimal irritation        |
| SILICA                                              | Rabbit                 | No significant irritation |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER            | Rabbit                 | Mild irritant             |
| CARBON BLACK                                        | Rabbit                 | No significant irritation |
| Toluene                                             | Rabbit                 | Irritant                  |

**Serious Eye Damage/Irritation**

| Name                                                | Species                | Value                     |
|-----------------------------------------------------|------------------------|---------------------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Rabbit                 | Moderate irritant         |
| GLASS BEADS                                         | Professional judgement | No significant irritation |
| 1,4-BIS[(2,3-EPOXYPROPOXY)METHYL]CYCLOHEXANE        | In vitro data          | No significant irritation |
| FUSED SILICA                                        | Rabbit                 | No significant irritation |
| ACRYLATE POLYMER                                    | Professional judgement | Mild irritant             |
| SILICA                                              | Rabbit                 | No significant irritation |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER            | Rabbit                 | Corrosive                 |
| CARBON BLACK                                        | Rabbit                 | No significant irritation |
| Toluene                                             | Rabbit                 | Moderate irritant         |

**Skin Sensitization**

| Name                                                | Species           | Value          |
|-----------------------------------------------------|-------------------|----------------|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Human and animal  | Sensitizing    |
| 1,4-BIS[(2,3-EPOXYPROPOXY)METHYL]CYCLOHEXANE        | similar compounds | Sensitizing    |
| FUSED SILICA                                        | Human and animal  | Not classified |
| SILICA                                              | Human and animal  | Not classified |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER            | Guinea pig        | Not classified |
| Toluene                                             | Guinea pig        | Not classified |

**Respiratory Sensitization**

| 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 |
| GLASS BEADS                                         | 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                        |
| FUSED SILICA                                        | In Vitro | Not mutagenic                                                                |
| SILICA                                              | In Vitro | Not mutagenic                                                                |
| 3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER             | In vivo  | Not mutagenic                                                                |
| 3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER             | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| 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 |
| GLASS BEADS                                         | Inhalation    | Multiple animal species | Some positive data exist, but the data are not sufficient for classification |
| FUSED SILICA                                        | Not Specified | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| SILICA                                              | Not Specified | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| 3-(TRIMETHOXSILYL)PROPYL GLYCIDYL ETHER             | Dermal        | Mouse                   | Not carcinogenic                                                             |
| 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         |
| FUSED SILICA                                        | Ingestion  | Not classified for female reproduction | Rat     | NOAEL 509 mg/kg/day   | 1 generation         |
| FUSED SILICA                                        | Inhalation | Not classified for male reproduction   | Rat     | NOAEL 497 mg/kg/day   | 1 generation         |
| FUSED SILICA                                        | Ingestion  | Not classified for development         | Rat     | NOAEL 1,350 mg/kg/day | during organogenesis |
| SILICA                                              | Ingestion  | Not classified for female reproduction | Rat     | NOAEL 509 mg/kg/day   | 1 generation         |
| SILICA                                              | Ingestion  | Not classified for male reproduction   | Rat     | NOAEL 497 mg/kg/day   | 1 generation         |

|                                           |            |                                        |       |                       |                        |
|-------------------------------------------|------------|----------------------------------------|-------|-----------------------|------------------------|
| SILICA                                    | Ingestion  | Not classified for development         | Rat   | NOAEL 1,350 mg/kg/day | during organogenesis   |
| 3-(TRIMETHOXY-SILYL)PROPYL GLYCIDYL ETHER | Ingestion  | Not classified for female reproduction | Rat   | NOAEL 1,000 mg/kg/day | 1 generation           |
| 3-(TRIMETHOXY-SILYL)PROPYL GLYCIDYL ETHER | Ingestion  | Not classified for male reproduction   | Rat   | NOAEL 1,000 mg/kg/day | 1 generation           |
| 3-(TRIMETHOXY-SILYL)PROPYL GLYCIDYL ETHER | Ingestion  | Not classified for development         | Rat   | NOAEL 3,000 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               |
| GLASS BEADS                                         | Inhalation | respiratory system                                                                                                         | Not classified | Human   | NOAEL not available   | occupational exposure |
| FUSED SILICA                                        | Inhalation | respiratory system   silicosis                                                                                             | Not classified | Human   | NOAEL Not available   | occupational exposure |
| SILICA                                              | Inhalation | respiratory system   silicosis                                                                                             | Not classified | Human   | NOAEL Not available   | occupational exposure |
| 3-(TRIMETHOXY-SILYL)PROPYL GLYCIDYL ETHER           | Ingestion  | heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   liver   immune system   nervous system | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 28 days               |

|              |            |                                            |                                                                              |                         |                       |                        |
|--------------|------------|--------------------------------------------|------------------------------------------------------------------------------|-------------------------|-----------------------|------------------------|
|              |            | kidney and/or bladder   respiratory system |                                                                              |                         |                       |                        |
| CARBON BLACK | Inhalation | pneumoconiosis                             | Not classified                                                               | Human                   | NOAEL Not available   | occupational exposure  |
| Toluene      | Inhalation | auditory system   eyes   olfactory system  | Causes damage to organs through prolonged or repeated exposure               | Human                   | NOAEL Not available   | poisoning and/or abuse |
| Toluene      | Inhalation | nervous system                             | May cause damage to organs though 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****Ecotoxicological information**

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

**Chemical fate information**

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

**SECTION 13: Disposal considerations**

### 13.1. Disposal methods

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

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

## SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

## SECTION 15: Regulatory information

### 15.1. US Federal Regulations

Contact 3M for more information.

#### EPCRA 311/312 Hazard Classifications:

##### Physical Hazards

Not applicable

##### Health Hazards

Carcinogenicity

Germ cell mutagenicity

Reproductive toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Skin Corrosion or Irritation

### 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

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.

Contact 3M for more information.

### 15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

## 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.

**Document Group:** 34-3781-1**Version Number:** 2.00**Issue Date:** 07/06/21**Supersedes Date:** 06/11/19

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## Safety Data Sheet

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**Document Group:** 19-0736-9  
**Issue Date:** 07/30/26

**Version Number:** 15.00  
**Supersedes Date:** 10/27/21

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Panel Bonding Adhesive - Part A, PN 08116 (Meets GM 6449G and Daimler Chrysler MS-COD 507)

#### Product Identification Numbers

LB-K100-0126-5

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Automotive, Part A of a two-part structural adhesive used to bond steel or aluminum auto body panels.

#### 1.3. Supplier's details

**MANUFACTURER:** 3M  
**DIVISION:** Automotive Aftermarket  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA  
**Telephone:** 1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

The label elements below were prepared in accordance with OSHA Hazard Communication Standard, 29 CFR 1910.1200. This information may be different from the actual product label information for labels regulated by other agencies.

#### 2.1. Hazard classification

Acute Toxicity (oral): Category 4.  
Acute Toxicity (dermal): Category 4.  
Acute Toxicity (inhalation): Category 4.  
Skin Corrosion/Irritation: Category 1B.  
Serious Eye Damage/Irritation: Category 1.  
Skin Sensitizer: Category 1.  
Reproductive Toxicity: Category 1B.  
Specific Target Organ Toxicity (single exposure): Category 1.  
Specific Target Organ Toxicity (single exposure): Category 3.

#### 2.2. Label elements

**Signal word**

Danger

### Symbols

Corrosion | Exclamation mark | Health Hazard |

### Pictograms



### Hazard Statements

Harmful if swallowed, in contact with skin or if inhaled.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
May damage fertility or the unborn child.  
May cause drowsiness or dizziness.  
May cause respiratory irritation.  
Causes damage to organs: blood or blood-forming organs.

### Precautionary statements

#### General:

Keep out of reach of children.

#### Prevention:

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Do not breathe vapors or dust.  
Wash exposed skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves, protective clothing, eye protection, face protection, and if needed, respiratory protection (see SDS Section 8).

#### Response:

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
IF exposed or concerned: Immediately call a POISON CENTER or doctor.  
Specific treatment (see Notes to Physician on this label).  
If skin irritation or rash occurs: Get medical attention.  
Take off contaminated clothing and wash it before reuse.

#### Storage:

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

#### Disposal:

Dispose of contents and container in accordance with applicable local, regional, national, and 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 PaO<sub>2</sub> (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. Hazards not otherwise classified**

May cause chemical gastrointestinal burns.

**Supplemental Information:**

Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

1% of the mixture consists of ingredients of unknown acute dermal toxicity.

**SECTION 3: Composition/information on ingredients**

| Ingredient                                      | C.A.S. No. | % by Wt                  |
|-------------------------------------------------|------------|--------------------------|
| Aliphatic Polymer Diamine                       | 68911-25-1 | 15 - 40 Trade Secret *   |
| Butadiene Acrylonitrile Polymer                 | 68683-29-4 | 10 - 30 Trade Secret *   |
| Fused Silica                                    | 60676-86-0 | 10 - 30                  |
| C12-14-tert-alkyl amines                        | 68955-53-3 | 5 - 10 Trade Secret *    |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | 90-72-2    | 5 - 10 Trade Secret *    |
| Poly(Oxypropylene)Diamine                       | 9046-10-0  | 3 - 7 Trade Secret *     |
| Dimethyl Siloxane, Reaction Product With Silica | 67762-90-7 | 1 - 5                    |
| Nitric acid, ammonium calcium salt              | 15245-12-2 | 1 - 5 Trade Secret *     |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | 4246-51-9  | 0.3 - 1.9                |
| Poly(Oxypropylene)Triamine                      | 39423-51-3 | 0.5 - 1.5 Trade Secret * |
| Bis[(Dimethylamino)Methyl]Phenol                | 71074-89-0 | 0.1 - 1.5 Trade Secret * |
| N-Aminoethylpiperazine                          | 140-31-8   | 0.1 - 1 Trade Secret *   |
| Toluene                                         | 108-88-3   | < 0.4                    |

\*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

**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**

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). 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 PaO<sub>2</sub> (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.

### **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 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 dikes 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 authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. 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/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

## 7.2. Conditions for safe storage including any incompatibilities

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

# SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

### Occupational exposure limits

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

| Ingredient                                              | C.A.S. No. | Agency | Limit type                                                                                                                                                 | Additional Comments                         |
|---------------------------------------------------------|------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Toluene                                                 | 108-88-3   | ACGIH  | TWA:20 ppm                                                                                                                                                 | A4: Not class. as human carcin, Ototoxicant |
| Toluene                                                 | 108-88-3   | OSHA   | TWA:200 ppm;CEIL:300 ppm                                                                                                                                   |                                             |
| Inert or Nuisance Dust, Respirable fraction             | 60676-86-0 | OSHA   | TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m <sup>3</sup> );TWA(respirable fraction):15 millions of particles/cu. ft.(5 mg/m <sup>3</sup> ) |                                             |
| Silica: Amorphous, including natural diatomaceous earth | 60676-86-0 | OSHA   | TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m <sup>3</sup>                                                                               |                                             |
| Silica: Amorphous, including natural diatomaceous earth | 67762-90-7 | OSHA   | TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m <sup>3</sup>                                                                               |                                             |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

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/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Full Face Shield

Indirect Vented Goggles

#### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the

substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. 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 vapors 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                                                                                                                             |
| Specific Physical Form:                     | Viscous                                                                                                                            |
| Color                                       | Amber                                                                                                                              |
| Odor                                        | Slight Amine                                                                                                                       |
| Odor threshold                              | No Data Available                                                                                                                  |
| pH                                          | Not Applicable                                                                                                                     |
| Melting point                               | Not Applicable                                                                                                                     |
| Boiling Point                               | No Data Available                                                                                                                  |
| Flash Point                                 | >=230 °F [Test Method:Closed Cup] [Details:Closed Cup SETAFLASH (Based on flammable ingredient at highest %) (ASTM D-3278-96 e-1)] |
| Evaporation rate                            | < 1 [Ref Std:BUOAC=1]                                                                                                              |
| Flammability                                | Not Applicable                                                                                                                     |
| Flammable Limits(LEL)                       | No Data Available                                                                                                                  |
| Flammable Limits(UEL)                       | No Data Available                                                                                                                  |
| Vapor Pressure                              | No Data Available                                                                                                                  |
| Relative Vapor Density                      | No Data Available                                                                                                                  |
| Density                                     | 1.1 g/ml                                                                                                                           |
| Relative Density                            | 1.1 [Test Method:Estimated] [Ref Std:WATER=1]                                                                                      |
| Solubility In Water                         | No Data Available                                                                                                                  |
| 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                         | 90,909 mm <sup>2</sup> /sec                                                                                                        |
| Hazardous Air Pollutants                    | 0.013 lb HAPS/lb solids [Test Method:Calculated]                                                                                   |
| Volatile Organic Compounds                  | 0.4 % weight [Test Method:calculated per CARB title 2]                                                                             |
| Volatile Organic Compounds                  | 4 g/l [Test Method:calculated SCAQMD rule 443.1]                                                                                   |
| VOC Less H <sub>2</sub> O & Exempt Solvents | 4 g/l [Test Method:calculated SCAQMD rule 443.1]                                                                                   |

**Particle Characteristics***Not Applicable***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 polymerization will not occur.

**10.4. Conditions to avoid**

None known.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products****Substance****Condition**

Carbon monoxide

Not Specified

Carbon dioxide

Not Specified

Oxides of Nitrogen

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 labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

**11.1. Information on Toxicological effects****Signs and Symptoms of Exposure**

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

**Inhalation:**

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:**

Harmful in contact with skin. Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**

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

**Ingestion:**

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

(see below).

### Additional Health Effects:

#### Single exposure may cause target organ effects:

Methemoglobinemia: Signs/symptoms may include headache, dizziness, nausea, difficulty breathing, and generalized 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 sensitized to amines may develop a cross-sensitization 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 >1,000 - =2,000 mg/kg |
| Overall product                                 | Inhalation-Vapor(4 hr)         |                        | No data available; calculated ATE >10 - =20 mg/l        |
| Overall product                                 | Ingestion                      |                        | No data available; calculated ATE >300 - =2,000 mg/kg   |
| Aliphatic Polymer Diamine                       | Dermal                         | Rat                    | LD50 > 2,000 mg/kg                                      |
| Aliphatic Polymer Diamine                       | Ingestion                      | Rat                    | LD50 > 2,000 mg/kg                                      |
| Fused Silica                                    | Dermal                         | Rabbit                 | LD50 > 5,000 mg/kg                                      |
| Fused Silica                                    | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 0.691 mg/l                                       |
| Fused Silica                                    | Ingestion                      | Rat                    | LD50 > 5,110 mg/kg                                      |
| Butadiene Acrylonitrile Polymer                 | Dermal                         | Rabbit                 | LD50 > 3,000 mg/kg                                      |
| Butadiene Acrylonitrile Polymer                 | Ingestion                      | Rat                    | LD50 > 15,300 mg/kg                                     |
| C12-14-tert-alkyl amines                        | Dermal                         | Rat                    | LD50 251 mg/kg                                          |
| C12-14-tert-alkyl amines                        | Inhalation-Vapor (4 hours)     | Rat                    | LC50 1.2 mg/l                                           |
| C12-14-tert-alkyl amines                        | Ingestion                      | Rat                    | LD50 320 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                                        |
| Poly(Oxypropylene)Diamine                       | Dermal                         | Rabbit                 | LD50 2,090 mg/kg                                        |
| Poly(Oxypropylene)Diamine                       | Ingestion                      | Rat                    | LD50 475 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                                      |
| 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(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                                        |
| Poly(Oxypropylene)Triamine                      | Inhalation-Vapor               | Professional judgement | LC50 estimated to be > 50 mg/l                          |
| Poly(Oxypropylene)Triamine                      | Dermal                         | Rat                    | LD50 > 1,000 mg/kg                                      |
| Poly(Oxypropylene)Triamine                      | Ingestion                      | Rat                    | LD50 550 mg/kg                                          |



|                                  |                            |        |                                        |
|----------------------------------|----------------------------|--------|----------------------------------------|
| Bis[(Dimethylamino)Methyl]Phenol | Ingestion                  |        | LD50 estimated to be 300 - 2,000 mg/kg |
| N-Aminoethylpiperazine           | Dermal                     | Rabbit | LD50 865 mg/kg                         |
| N-Aminoethylpiperazine           | Ingestion                  | Rat    | LD50 1,470 mg/kg                       |
| Toluene                          | Dermal                     | Rat    | LD50 12,000 mg/kg                      |
| Toluene                          | Inhalation-Vapor (4 hours) | Rat    | LC50 30 mg/l                           |
| Toluene                          | Ingestion                  | Rat    | LD50 5,550 mg/kg                       |

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

| Name                                            | Species          | Value                     |
|-------------------------------------------------|------------------|---------------------------|
| Aliphatic Polymer Diamine                       | Rat              | Irritant                  |
| Fused Silica                                    | Rabbit           | No significant irritation |
| Butadiene Acrylonitrile Polymer                 | Rabbit           | Irritant                  |
| C12-14-tert-alkyl amines                        | Rabbit           | Corrosive                 |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Rabbit           | Corrosive                 |
| Poly(Oxypropylene)Diamine                       | Rabbit           | Corrosive                 |
| Dimethyl Siloxane, Reaction Product With Silica | Rabbit           | No significant irritation |
| Nitric acid, ammonium calcium salt              | similar compound | No significant irritation |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Rabbit           | Corrosive                 |
| Poly(Oxypropylene)Triamine                      | Rabbit           | Mild irritant             |
| Bis[(Dimethylamino)Methyl]Phenol                | similar compound | Corrosive                 |
| N-Aminoethylpiperazine                          | Rabbit           | Corrosive                 |
| Toluene                                         | Rabbit           | Irritant                  |

### Serious Eye Damage/Irritation

| Name                                            | Species          | Value                     |
|-------------------------------------------------|------------------|---------------------------|
| Aliphatic Polymer Diamine                       | In vitro data    | Severe irritant           |
| Fused Silica                                    | Rabbit           | No significant irritation |
| Butadiene Acrylonitrile Polymer                 | Rabbit           | Mild irritant             |
| C12-14-tert-alkyl amines                        | Rabbit           | Corrosive                 |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Rabbit           | Corrosive                 |
| Poly(Oxypropylene)Diamine                       | Rabbit           | Corrosive                 |
| Dimethyl Siloxane, Reaction Product With Silica | Rabbit           | No significant irritation |
| Nitric acid, ammonium calcium salt              | Rabbit           | Corrosive                 |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Rabbit           | Corrosive                 |
| Poly(Oxypropylene)Triamine                      | In vitro data    | Corrosive                 |
| Bis[(Dimethylamino)Methyl]Phenol                | similar compound | Corrosive                 |
| N-Aminoethylpiperazine                          | Rabbit           | Corrosive                 |
| Toluene                                         | Rabbit           | Moderate irritant         |

### Skin Sensitization

| Name                            | Species          | Value          |
|---------------------------------|------------------|----------------|
| Aliphatic Polymer Diamine       | Guinea pig       | Sensitizing    |
| Fused Silica                    | Human and animal | Not classified |
| Butadiene Acrylonitrile Polymer | Guinea pig       | Sensitizing    |
| C12-14-tert-alkyl amines        | Guinea pig       | Sensitizing    |

|                                                 |                        |                |
|-------------------------------------------------|------------------------|----------------|
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Guinea pig             | Not classified |
| Dimethyl Siloxane, Reaction Product With Silica | Human and animal       | Not classified |
| Nitric acid, ammonium calcium salt              | Mouse                  | Not classified |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Professional judgement | Sensitizing    |
| Poly(Oxypropylene)Triamine                      | Guinea pig             | Not classified |
| N-Aminoethylpiperazine                          | Guinea pig             | Sensitizing    |
| Toluene                                         | Guinea pig             | Not classified |

### Respiratory Sensitization

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

### Germ Cell Mutagenicity

| Name                                            | Route    | Value                                                                        |
|-------------------------------------------------|----------|------------------------------------------------------------------------------|
| Aliphatic Polymer Diamine                       | In Vitro | Not mutagenic                                                                |
| Fused Silica                                    | In Vitro | Not mutagenic                                                                |
| C12-14-tert-alkyl amines                        | In vivo  | Not mutagenic                                                                |
| C12-14-tert-alkyl amines                        | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | In Vitro | Not mutagenic                                                                |
| Poly(Oxypropylene)Diamine                       | In Vitro | Not mutagenic                                                                |
| Poly(Oxypropylene)Diamine                       | In vivo  | Not mutagenic                                                                |
| Dimethyl Siloxane, Reaction Product With Silica | In Vitro | Not mutagenic                                                                |
| Nitric acid, ammonium calcium salt              | In Vitro | Not mutagenic                                                                |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | In Vitro | Not mutagenic                                                                |
| Poly(Oxypropylene)Triamine                      | In Vitro | Not mutagenic                                                                |
| Poly(Oxypropylene)Triamine                      | In vivo  | 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                                                                        |
|-------------------------------------------------|---------------|---------|------------------------------------------------------------------------------|
| Fused Silica                                    | 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          |
|---------------------------|-----------|----------------------------------------|---------|-----------------------|----------------------------|
| Aliphatic Polymer Diamine | Ingestion | Not classified for female reproduction | Rat     | NOAEL 1,000 mg/kg/day | prematuring into lactation |
| Aliphatic Polymer Diamine | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 1,000           | 29 days                    |

|                                                 |            |                                        |        |                       |                              |
|-------------------------------------------------|------------|----------------------------------------|--------|-----------------------|------------------------------|
|                                                 |            |                                        |        | mg/kg/day             |                              |
| Aliphatic Polymer Diamine                       | Ingestion  | Not classified for development         | Rat    | NOAEL 1,000 mg/kg/day | premating into lactation     |
| Fused Silica                                    | Ingestion  | Not classified for female reproduction | Rat    | NOAEL 509 mg/kg/day   | 1 generation                 |
| Fused Silica                                    | Inhalation | Not classified for male reproduction   | Rat    | NOAEL 497 mg/kg/day   | 1 generation                 |
| Fused Silica                                    | Ingestion  | Not classified for development         | Rat    | NOAEL 1,350 mg/kg/day | during organogenesis         |
| C12-14-tert-alkyl amines                        | Ingestion  | Not classified for female reproduction | Rat    | NOAEL 124 mg/kg/day   | 1 generation                 |
| C12-14-tert-alkyl amines                        | Ingestion  | Not classified for male reproduction   | Rat    | NOAEL 107 mg/kg/day   | 1 generation                 |
| C12-14-tert-alkyl amines                        | Dermal     | Not classified for development         | Rat    | NOAEL 45 mg/kg/day    | during gestation             |
| C12-14-tert-alkyl amines                        | Ingestion  | Not classified for development         | Rat    | NOAEL 21 mg/kg/day    | 1 generation                 |
| 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             |
| 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         |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | Not classified for female reproduction | Rat    | NOAEL 600 mg/kg/day   | premating 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   | premating into lactation     |
| Poly(Oxypropylene)Triamine                      | Dermal     | Not classified for female reproduction | Rat    | NOAEL 100 mg/kg/day   | premating into lactation     |
| Poly(Oxypropylene)Triamine                      | Dermal     | Not classified for male reproduction   | Rat    | NOAEL 100 mg/kg/day   | 50 days                      |
| Poly(Oxypropylene)Triamine                      | Dermal     | Not classified for development         | Rat    | NOAEL 100 mg/kg/day   | premating into lactation     |
| Poly(Oxypropylene)Triamine                      | Ingestion  | Not classified for development         | Rat    | NOAEL 125 mg/kg/day   | during gestation             |
| 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 |
|------|-------|-----------------|-------|---------|-------------|-------------------|
|------|-------|-----------------|-------|---------|-------------|-------------------|

|                                               |            |                                   |                                                                              |                        |                     |                        |
|-----------------------------------------------|------------|-----------------------------------|------------------------------------------------------------------------------|------------------------|---------------------|------------------------|
| Aliphatic Polymer Diamine                     | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | similar health hazards | Irritation Positive |                        |
| Aliphatic Polymer Diamine                     | Ingestion  | central nervous system depression | May cause drowsiness or dizziness                                            | Rat                    | NOAEL Not available |                        |
| Butadiene Acrylonitrile Polymer               | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL not available |                        |
| C12-14-tert-alkyl amines                      | Inhalation | respiratory irritation            | May cause respiratory irritation                                             | Rat                    | NOAEL 0.019 mg/l    | 4 weeks                |
| 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 |                        |
| Poly(Oxypropylene)Diamine                     | 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 |                        |
| 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 |                        |
| Poly(Oxypropylene)Triamine                    | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | similar health hazards | 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 |
|---------------------------|-----------|---------------------------------|----------------|---------|-----------------------|-------------------|
| Aliphatic Polymer Diamine | Ingestion | heart                           | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 29 days           |
| Aliphatic Polymer Diamine | Ingestion | skin                            | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 29 days           |
| Aliphatic Polymer Diamine | Ingestion | endocrine system                | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 29 days           |
| Aliphatic Polymer Diamine | Ingestion | gastrointestinal tract          | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 29 days           |
| Aliphatic Polymer Diamine | Ingestion | bone, teeth, nails, and/or hair | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 29 days           |
| Aliphatic Polymer Diamine | Ingestion | hematopoietic system            | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 29 days           |
| Aliphatic Polymer Diamine | Ingestion | liver                           | Not classified | Rat     | NOAEL 1,000 mg/kg/day | 29 days           |
| Aliphatic Polymer Diamine | Ingestion | immune system                   | Not classified | Rat     | NOAEL 1,000           | 29 days           |

|                                           |            |                       |                |       | mg/kg/day             |                       |
|-------------------------------------------|------------|-----------------------|----------------|-------|-----------------------|-----------------------|
| Aliphatic Polymer Diamine                 | Ingestion  | muscles               | Not classified | Rat   | NOAEL 1,000 mg/kg/day | 29 days               |
| Aliphatic Polymer Diamine                 | Ingestion  | nervous system        | Not classified | Rat   | NOAEL 1,000 mg/kg/day | 29 days               |
| Aliphatic Polymer Diamine                 | Ingestion  | eyes                  | Not classified | Rat   | NOAEL 1,000 mg/kg/day | 29 days               |
| Aliphatic Polymer Diamine                 | Ingestion  | kidney and/or bladder | Not classified | Rat   | NOAEL 1,000 mg/kg/day | 29 days               |
| Aliphatic Polymer Diamine                 | Ingestion  | respiratory system    | Not classified | Rat   | NOAEL 1,000 mg/kg/day | 29 days               |
| Aliphatic Polymer Diamine                 | Ingestion  | vascular system       | Not classified | Rat   | NOAEL 1,000 mg/kg/day | 29 days               |
| Fused Silica                              | Inhalation | respiratory system    | Not classified | Human | NOAEL Not available   | occupational exposure |
| Fused Silica                              | Inhalation | silicosis             | Not classified | Human | NOAEL Not available   | occupational exposure |
| C12-14-tert-alkyl amines                  | Dermal     | endocrine system      | Not classified | Rat   | NOAEL 60 mg/kg/day    | 4 weeks               |
| C12-14-tert-alkyl amines                  | Dermal     | hematopoietic system  | Not classified | Rat   | NOAEL 60 mg/kg/day    | 4 weeks               |
| C12-14-tert-alkyl amines                  | Dermal     | liver                 | Not classified | Rat   | NOAEL 60 mg/kg/day    | 4 weeks               |
| C12-14-tert-alkyl amines                  | Dermal     | muscles               | Not classified | Rat   | NOAEL 60 mg/kg/day    | 4 weeks               |
| C12-14-tert-alkyl amines                  | Dermal     | nervous system        | Not classified | Rat   | NOAEL 60 mg/kg/day    | 4 weeks               |
| C12-14-tert-alkyl amines                  | Dermal     | kidney and/or bladder | Not classified | Rat   | NOAEL 60 mg/kg/day    | 4 weeks               |
| C12-14-tert-alkyl amines                  | Inhalation | hematopoietic system  | Not classified | Rat   | NOAEL 0.129 mg/l      | 4 weeks               |
| C12-14-tert-alkyl amines                  | Inhalation | heart                 | Not classified | Rat   | NOAEL 0.129 mg/l      | 4 weeks               |
| C12-14-tert-alkyl amines                  | Inhalation | endocrine system      | Not classified | Rat   | NOAEL 0.129 mg/l      | 4 weeks               |
| C12-14-tert-alkyl amines                  | Inhalation | liver                 | Not classified | Rat   | NOAEL 0.129 mg/l      | 4 weeks               |
| C12-14-tert-alkyl amines                  | Inhalation | muscles               | Not classified | Rat   | NOAEL 0.129 mg/l      | 4 weeks               |
| C12-14-tert-alkyl amines                  | Inhalation | nervous system        | Not classified | Rat   | NOAEL 0.129 mg/l      | 4 weeks               |
| C12-14-tert-alkyl amines                  | Inhalation | kidney and/or bladder | Not classified | Rat   | NOAEL 0.129 mg/l      | 4 weeks               |
| 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                 | Not classified | Rat   | NOAEL 125 mg/kg/day   | 4 weeks               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Dermal     | nervous system        | Not classified | Rat   | NOAEL 125 mg/kg/day   | 4 weeks               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Dermal     | auditory system       | Not classified | Rat   | NOAEL 125 mg/kg/day   | 4 weeks               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Dermal     | hematopoietic system  | Not classified | Rat   | NOAEL 125 mg/kg/day   | 4 weeks               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol | Dermal     | eyes                  | Not classified | Rat   | NOAEL 125 mg/kg/day   | 4 weeks               |

|                                                 |            |                                 |                |       |                     |                       |
|-------------------------------------------------|------------|---------------------------------|----------------|-------|---------------------|-----------------------|
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | heart                           | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | endocrine system                | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | hematopoietic system            | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | liver                           | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | muscles                         | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | nervous system                  | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | kidney and/or bladder           | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | respiratory system              | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | vascular system                 | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | auditory system                 | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | skin                            | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | gastrointestinal tract          | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | bone, teeth, nails, and/or hair | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | immune system                   | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Tris(2,4,6-Dimethylaminomonomethyl)Phenol       | Ingestion  | eyes                            | Not classified | Rat   | NOAEL 150 mg/kg/day | 90 days               |
| Dimethyl Siloxane, Reaction Product With Silica | Inhalation | respiratory system              | Not classified | Human | NOAEL Not available | occupational exposure |
| Dimethyl Siloxane, Reaction Product With Silica | Inhalation | silicosis                       | Not classified | Human | NOAEL Not available | occupational exposure |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | gastrointestinal tract          | Not classified | Rat   | NOAEL 600 mg/kg/day | 59 days               |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | heart                           | Not classified | Rat   | NOAEL 600 mg/kg/day | 59 days               |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | endocrine system                | Not classified | Rat   | NOAEL 600 mg/kg/day | 59 days               |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | bone, teeth, nails, and/or hair | Not classified | Rat   | NOAEL 600 mg/kg/day | 59 days               |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | hematopoietic system            | Not classified | Rat   | NOAEL 600 mg/kg/day | 59 days               |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | liver                           | Not classified | Rat   | NOAEL 600 mg/kg/day | 59 days               |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | immune system                   | Not classified | Rat   | NOAEL 600 mg/kg/day | 59 days               |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol   | Ingestion  | muscles                         | Not classified | Rat   | NOAEL 600 mg/kg/day | 59 days               |

|                                               |           |                                 |                |     |                     |         |
|-----------------------------------------------|-----------|---------------------------------|----------------|-----|---------------------|---------|
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | Ingestion | nervous system                  | Not classified | Rat | NOAEL 600 mg/kg/day | 59 days |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | Ingestion | eyes                            | Not classified | Rat | NOAEL 600 mg/kg/day | 59 days |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | Ingestion | kidney and/or bladder           | Not classified | Rat | NOAEL 600 mg/kg/day | 59 days |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | Ingestion | respiratory system              | Not classified | Rat | NOAEL 600 mg/kg/day | 59 days |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | Ingestion | vascular system                 | Not classified | Rat | NOAEL 600 mg/kg/day | 59 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | skin                            | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | heart                           | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | endocrine system                | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | gastrointestinal tract          | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | bone, teeth, nails, and/or hair | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | hematopoietic system            | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | liver                           | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | immune system                   | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | muscles                         | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | nervous system                  | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | eyes                            | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | kidney and/or bladder           | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | respiratory system              | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Dermal    | vascular system                 | Not classified | Rat | NOAEL 160 mg/kg/day | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | heart                           | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | skin                            | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | endocrine system                | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | gastrointestinal tract          | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | bone, teeth, nails, and/or hair | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | hematopoietic system            | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | liver                           | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | immune system                   | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | muscles                         | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | nervous system                  | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | eyes                            | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | kidney and/or bladder           | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | respiratory system              | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| Poly(Oxypropylene)Triamine                    | Ingestion | vascular system                 | Not classified | Rat | NOAEL 75 mg/kg/day  | 90 days |
| N-Aminoethylpiperazine                        | Dermal    | skin                            | Not classified | Rat | NOAEL 100           | 29 days |

|                        |            |                                 |                                                                              |                         | mg/kg/day             |                        |
|------------------------|------------|---------------------------------|------------------------------------------------------------------------------|-------------------------|-----------------------|------------------------|
| N-Aminoethylpiperazine | Dermal     | hematopoietic system            | Not classified                                                               | Rat                     | NOAEL 1,000 mg/kg/day | 29 days                |
| N-Aminoethylpiperazine | Dermal     | nervous system                  | Not classified                                                               | Rat                     | NOAEL 1,000 mg/kg/day | 29 days                |
| N-Aminoethylpiperazine | Dermal     | 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/m3       | 13 weeks               |
| N-Aminoethylpiperazine | Inhalation | hematopoietic system            | Not classified                                                               | Rat                     | NOAEL 53.8 mg/m3      | 13 weeks               |
| N-Aminoethylpiperazine | Inhalation | eyes                            | Not classified                                                               | Rat                     | NOAEL 53.8 mg/m3      | 13 weeks               |
| N-Aminoethylpiperazine | Inhalation | kidney and/or bladder           | Not classified                                                               | Rat                     | NOAEL 53.8 mg/m3      | 13 weeks               |
| N-Aminoethylpiperazine | Ingestion  | heart                           | Not classified                                                               | Rat                     | NOAEL 598 mg/kg/day   | 28 days                |
| N-Aminoethylpiperazine | Ingestion  | endocrine system                | Not classified                                                               | Rat                     | NOAEL 598 mg/kg/day   | 28 days                |
| N-Aminoethylpiperazine | Ingestion  | hematopoietic system            | Not classified                                                               | Rat                     | NOAEL 598 mg/kg/day   | 28 days                |
| N-Aminoethylpiperazine | Ingestion  | liver                           | Not classified                                                               | Rat                     | NOAEL 598 mg/kg/day   | 28 days                |
| N-Aminoethylpiperazine | Ingestion  | nervous system                  | Not classified                                                               | Rat                     | NOAEL 598 mg/kg/day   | 28 days                |
| N-Aminoethylpiperazine | Ingestion  | kidney and/or bladder           | Not classified                                                               | Rat                     | NOAEL 598 mg/kg/day   | 28 days                |
| Toluene                | Inhalation | auditory system                 | Causes damage to organs through prolonged or repeated exposure               | Human                   | NOAEL Not available   | poisoning and/or abuse |
| Toluene                | Inhalation | nervous system                  | Causes damage to organs through prolonged or repeated exposure               | Human                   | NOAEL Not available   | poisoning and/or abuse |
| Toluene                | Inhalation | eyes                            | Causes damage to organs through prolonged or repeated exposure               | Human                   | NOAEL Not available   | poisoning and/or abuse |
| Toluene                | Inhalation | 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                           | Not classified                                                               | Rat                     | NOAEL 11.3 mg/l       | 15 weeks               |
| Toluene                | Inhalation | liver                           | Not classified                                                               | Rat                     | NOAEL 11.3 mg/l       | 15 weeks               |
| Toluene                | Inhalation | 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            | Not classified                                                               | Human                   | NOAEL Not available   | occupational exposure  |
| Toluene                | Inhalation | 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                           | Not classified                                                               | Multiple                | NOAEL                 | 13 weeks               |



|         |           |                       |                |                         |                       |          |
|---------|-----------|-----------------------|----------------|-------------------------|-----------------------|----------|
|         |           |                       |                | animal species          | 2,500 mg/kg/day       |          |
| Toluene | Ingestion | 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                                                                        |
|---------------------------|------------------------------------------------------------------------------|
| Poly(Oxypropylene)Diamine | Some positive data exist, but the data are not sufficient for classification |
| 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****Ecotoxicological information**

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

**Chemical fate information**

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

**SECTION 13: Disposal considerations****13.1. Disposal methods**

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

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

**SECTION 14: Transport Information**

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

**SECTION 15: Regulatory information****15.1. US Federal Regulations**

Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:**

**Physical Hazards**

Not Applicable.

**Health Hazards**

Acute toxicity

Hazard Not Otherwise Classified (HNOC)

Reproductive toxicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

Skin Corrosion or Irritation

Specific target organ toxicity (single or repeated exposure)

**15.2. State Regulations**

Contact 3M for more information.

**15.3. Chemical Inventories**

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.

Contact 3M for more information.

**15.4. International Regulations**

Contact 3M for more information.

**This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.****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.

**HMIS Hazard Classification****Health:** \*4 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

**Document Group:** 19-0736-9  
**Issue Date:** 07/30/26**Version Number:** 15.00  
**Supersedes Date:** 10/27/21

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