



## Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Fastener Adhesive 2510 Orange

#### Product Identification Numbers

70-0706-9833-0, 70-0706-9887-6, 70-0708-5154-1, CG-7901-0773-6  
7000002019, 7100019297, 7100007438, 4000014509

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

##### Recommended use

Adhesive, Assembly of motored machinery

#### 1.3. Supplier's details

|                      |  |
|----------------------|--|
| <b>MANUFACTURER:</b> | 3M   |
| <b>DIVISION:</b>     | 3M Canada<br>Automotive and Aerospace Solutions Division |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA                  |
| <b>Telephone:</b>    | 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

#### 2.1. Hazard classification

Flammable Liquid: Category 2.  
Serious Eye Damage/Irritation: Category 1.  
Skin Corrosion/Irritation: Category 1C.  
Skin Sensitizer: Category 1.  
Reproductive Toxicity: Category 1B.  
Carcinogenicity: Category 2.  
Germ Cell Mutagenicity: Category 2.  
Specific Target Organ Toxicity (single exposure): Category 3.  
Specific Target Organ Toxicity (repeated exposure): Category 1.

#### 2.2. Label elements

##### Signal word

Danger

**Symbols**

Flame | Corrosion | Exclamation mark | Health Hazard |

**Pictograms****Hazard Statements**

Highly flammable liquid and vapor.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

May damage fertility or the unborn child.

Suspected of causing cancer.

Suspected of causing genetic defects.

Causes damage to organs through prolonged or repeated exposure:

nervous system |

sensory organs |

**Precautionary Statements****Prevention:**

Obtain special instructions before use.

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

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing, and eye/face protection.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

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

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

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

Wash contaminated clothing before reuse.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF exposed or concerned: Get medical advice/attention.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

**Storage:**

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

**Disposal:**

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

**2.3. Hazards not otherwise classified**

May cause chemical gastrointestinal burns.

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

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

| Ingredient  | C.A.S. No.    | % by Wt                |
|---|---------------|------------------------|
| TOLUENE   | 108-88-3      | 30 - 60 Trade Secret * |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | 25068-38-6    | 10 - 30 Trade Secret * |
| UREA FORMALDEHYDE MELAMINE RESIN                    | Trade Secret* | 7 - 13                 |
| N-BUTYL GLYCIDYL ETHER                              | 2426-08-6     | 2 - 8 Trade Secret *   |
| 4,4'-TRIMETHYLENEDIPIPERIDINE                       | 16898-52-5    | < 5 Trade Secret *     |
| ISOPROPYL ALCOHOL                                   | 67-63-0       | 1 - 5 Trade Secret *   |
| SILICA  | 7631-86-9     | 1 - 5                  |
| VINYL BUTYRAL-VINYL ACETATE-VINYL ALCOHOL POLYMER   | 27360-07-2    | 1 - 5                  |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | 931-36-2      | < 3 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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

**Eye Contact:**

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

**If Swallowed:**

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

**4.2. Most important symptoms and effects, both acute and delayed**

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

**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 flammable liquids such as dry chemical or carbon dioxide to extinguish.

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

Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products****Substance**

Aldehydes  
Carbon monoxide  
Carbon dioxide  
Hydrogen Chloride

**Condition**

During Combustion  
During Combustion  
During Combustion  
During Combustion

**5.3. Special protective actions for fire-fighters**

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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. Cover spill area with a fire-extinguishing foam. 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 using non-sparking tools. Place in a metal 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**

For industrial/occupational use only. Not for consumer sale or use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (gloves, respirators, etc.) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapor accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

## 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from acids. Store away from oxidizing agents. Store away from amines.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

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

| Ingredient  | 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  |   |
| N-BUTYL GLYCIDYL ETHER  | 2426-08-6  | ACGIH  | TWA:3 ppm   | SKIN; Dermal sensitizer                     |
| N-BUTYL GLYCIDYL ETHER  | 2426-08-6  | OSHA   | TWA:270 mg/m <sup>3</sup> (50 ppm)  |   |
| ISOPROPYL ALCOHOL   | 67-63-0    | ACGIH  | TWA:200 ppm;STEL:400 ppm  | A4: Not class. as human carcin              |
| ISOPROPYL ALCOHOL   | 67-63-0    | OSHA   | TWA:980 mg/m <sup>3</sup> (400 ppm)   |   |
| DUST, INERT OR NUISANCE   | 7631-86-9  | OSHA   | TWA(as total dust):15 mg/m <sup>3</sup> ;TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m <sup>3</sup> );TWA(respirable fraction):5 mg/m <sup>3</sup> ;TWA(respirable fraction):15 millions of particles/cu. ft.(5 mg/m <sup>3</sup> ) |   |
| Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles  | 7631-86-9  | ACGIH  | TWA(inhalable particulates):10 mg/m <sup>3</sup>  |   |
| Particles (insoluble or poorly soluble) not otherwise specified, respirable particles | 7631-86-9  | ACGIH  | TWA(respirable particles):3 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

Provide ventilated enclosure for curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. 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. Use explosion-proof ventilation 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 (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

Orange

Odor

Aromatic Solvent

Odor threshold

*No Data Available*

pH

*Not Applicable*

Melting point

*Not Applicable*

Boiling Point

190 - 230 °F

Flash Point

Approximately 40 °F [Test Method: Tagliabue Closed Cup]

Evaporation rate

*No Data Available*

Flammability (solid, gas)

Not Applicable

Flammable Limits(LEL)

*No Data Available*

Flammable Limits(UEL)

*No Data Available*

Vapor Pressure

Approximately 30 mmHg

Vapor Density

2 - 3 [Ref Std: AIR=1]

Density

*No Data Available*

Specific Gravity

1 [Ref Std: WATER=1]

Solubility in Water

Negligible

Solubility- non-water

*No Data Available*

|   |   |
|---|---|
| Partition coefficient: n-octanol/ water | No Data Available   |
| Autoignition temperature                | > 400 °C  |
| Decomposition temperature               | No Data Available   |
| Viscosity                               | Approximately 1,300 centistoke                                |
| Molecular weight                        | No Data Available   |
| Volatile Organic Compounds              | <=532 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1] |
| Percent volatile                        | 52 - 54 % weight  |
| VOC Less H2O & Exempt Solvents          | <=533 g/l [ <i>Test Method</i> :calculated SCAQMD rule 443.1] |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

Amines  
Alcohols  
Water

### 10.6. Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
| None known.      |                  |

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

May be harmful if inhaled.

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

May cause additional health effects (see below).

**Skin Contact:**

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.

May cause additional health effects (see below).

**Eye Contact:**

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

**Ingestion:**

May be harmful if swallowed.

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

May cause additional health effects (see below).

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

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Prolonged or repeated exposure may cause target organ effects:**

Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

**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.

| <u>Ingredient</u>      | <u>CAS No.</u> | <u>Class Description</u>      | <u>Regulation</u>                           |
|------------------------|----------------|-------------------------------|---|
| 1-Butyl glycidyl ether | 2426-08-6      | 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**

| <u>Name</u>     | <u>Route</u>           | <u>Species</u> | <u>Value</u>                                     |
|-----------------|------------------------|----------------|--|
| Overall product | Dermal                 |                | No data available; calculated ATE >5,000 mg/kg   |
| Overall product | Inhalation-Vapor(4 hr) |                | No data available; calculated ATE >20 - =50 mg/l |



|   |                                |                        |   |
|---|--------------------------------|------------------------|---|
| Overall product                                     | Ingestion                      |                        | No data available; calculated ATE >2,000 - =5,000 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  |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Dermal                         | Rat                    | LD50 > 1,600 mg/kg                                      |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Ingestion                      | Rat                    | LD50 > 1,000 mg/kg                                      |
| N-BUTYL GLYCIDYL ETHER                              | Dermal                         | Professional judgement | LD50 estimated to be 1,000 - 2,000 mg/kg                |
| N-BUTYL GLYCIDYL ETHER                              | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 14 mg/l  |
| N-BUTYL GLYCIDYL ETHER                              | Inhalation-Vapor (4 hours)     | Rat                    | LC50 7.7 mg/l   |
| N-BUTYL GLYCIDYL ETHER                              | Ingestion                      | Rat                    | LD50 1,530 mg/kg  |
| 4,4'-TRIMETHYLENEDIPIPERIDINE                       | Dermal                         | Rabbit                 | LD50 > 2,000 mg/kg                                      |
| 4,4'-TRIMETHYLENEDIPIPERIDINE                       | Ingestion                      | Rat                    | LD50 440 mg/kg  |
| ISOPROPYL ALCOHOL                                   | Dermal                         | Rabbit                 | LD50 12,870 mg/kg                                       |
| ISOPROPYL ALCOHOL                                   | Inhalation-Vapor (4 hours)     | Rat                    | LC50 72.6 mg/l  |
| ISOPROPYL ALCOHOL                                   | Ingestion                      | Rat                    | LD50 4,710 mg/kg  |
| VINYL BUTYRAL-VINYL ACETATE-VINYL ALCOHOL POLYMER   | Dermal                         | Rabbit                 | LD50 > 7,940 mg/kg                                      |
| VINYL BUTYRAL-VINYL ACETATE-VINYL ALCOHOL POLYMER   | Ingestion                      | Rat                    | LD50 > 10,000 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                                      |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | Ingestion                      | Rat                    | LD50 681 mg/kg  |

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

| Name  | Species                 | Value                     |
|---|-------------------------|---------------------------|
| TOLUENE   | Rabbit                  | Irritant                  |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Rabbit                  | Mild irritant             |
| N-BUTYL GLYCIDYL ETHER                              | Rabbit                  | Mild irritant             |
| 4,4'-TRIMETHYLENEDIPIPERIDINE                       | Rabbit                  | Corrosive                 |
| ISOPROPYL ALCOHOL                                   | Multiple animal species | No significant irritation |
| SILICA  | Rabbit                  | No significant irritation |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | Rabbit                  | Corrosive                 |

### Serious Eye Damage/Irritation

| Name  | Species                | Value                     |
|---|------------------------|---------------------------|
| TOLUENE   | Rabbit                 | Moderate irritant         |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Rabbit                 | Moderate irritant         |
| N-BUTYL GLYCIDYL ETHER                              | Rabbit                 | Severe irritant           |
| 4,4'-TRIMETHYLENEDIPIPERIDINE                       | similar health hazards | Corrosive                 |
| ISOPROPYL ALCOHOL                                   | Rabbit                 | Severe irritant           |
| SILICA  | Rabbit                 | No significant irritation |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | Rabbit                 | Corrosive                 |

**Skin Sensitization**

| Name  | Species                 | Value          |
|---|-------------------------|----------------|
| TOLUENE   | Guinea pig              | Not classified |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Human and animal        | Sensitizing    |
| N-BUTYL GLYCIDYL ETHER                              | Multiple animal species | Sensitizing    |
| 4,4'-TRIMETHYLENEDIPIPERIDINE                       | Guinea pig              | Not classified |
| ISOPROPYL ALCOHOL                                   | Guinea pig              | Not classified |
| SILICA  | Human and animal        | Not classified |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | Mouse                   | Sensitizing    |

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

| Name  | Route    | Value  |
|---|----------|--|
| TOLUENE   | In Vitro | Not mutagenic  |
| TOLUENE   | In vivo  | Not mutagenic  |
| 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 |
| N-BUTYL GLYCIDYL ETHER                              | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| N-BUTYL GLYCIDYL ETHER                              | In vivo  | Mutagenic  |
| 4,4'-TRIMETHYLENEDIPIPERIDINE                       | In Vitro | Not mutagenic  |
| ISOPROPYL ALCOHOL                                   | In Vitro | Not mutagenic  |
| ISOPROPYL ALCOHOL                                   | In vivo  | Not mutagenic  |
| SILICA  | In Vitro | Not mutagenic  |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | In Vitro | Not mutagenic  |

**Carcinogenicity**

| Name  | Route         | Species                 | Value  |
|---|---------------|-------------------------|--|
| 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 |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Dermal        | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| N-BUTYL GLYCIDYL ETHER                              | Ingestion     | Multiple animal species | Carcinogenic   |
| ISOPROPYL ALCOHOL                                   | Inhalation    | Rat                     | 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 |

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

| Name  | Route      | Value                                  | Species | Test Result           | Exposure Duration          |
|---|------------|--|---------|-----------------------|----------------------------|
| 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     |
| 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               |
| N-BUTYL GLYCIDYL ETHER                              | Inhalation | Not classified for male reproduction   | Rat     | NOAEL 0.2 mg/l        | 10 weeks                   |
| N-BUTYL GLYCIDYL ETHER                              | Ingestion  | Toxic to development                   | Rat     | NOAEL 100 mg/kg/day   | during gestation           |
| ISOPROPYL ALCOHOL                                   | Ingestion  | Not classified for female reproduction | Rat     | NOAEL 1,000 mg/kg/day | 2 generation               |
| ISOPROPYL ALCOHOL                                   | Ingestion  | Not classified for male reproduction   | Rat     | NOAEL 500 mg/kg/day   | 2 generation               |
| ISOPROPYL ALCOHOL                                   | Ingestion  | Not classified for development         | Rat     | NOAEL 400 mg/kg/day   | during organogenesis       |
| ISOPROPYL ALCOHOL                                   | Inhalation | Not classified for development         | Rat     | LOAEL 9 mg/l          | during gestation           |
| 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       |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | Ingestion  | Not classified for female reproduction | Rat     | NOAEL 150 mg/kg/day   | prematuring into lactation |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | Ingestion  | Not classified for male reproduction   | Rat     | NOAEL 150 mg/kg/day   | 29 days                    |
| 2-ETHYL-4-METHYL-IMIDAZOLE                          | Ingestion  | Not classified for development         | Rat     | NOAEL 230 mg/kg/day   | during gestation           |

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

| Name                          | Route      | Target Organ(s)                   | Value  | Species                 | Test Result         | Exposure Duration      |
|-------------------------------|------------|-----------------------------------|--|-------------------------|---------------------|------------------------|
| 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 |
| N-BUTYL GLYCIDYL ETHER        | Inhalation | respiratory irritation            | May cause respiratory irritation   | official classification | NOAEL Not available |                        |
| 4,4'-TRIMETHYLENEDIPIPERIDINE | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | similar health hazards  | NOAEL not available |                        |

|                            |            |                                   |  |                        |                     |                        |
|----------------------------|------------|-----------------------------------|--|------------------------|---------------------|------------------------|
| ISOPROPYL ALCOHOL          | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                  | NOAEL Not available |                        |
| ISOPROPYL ALCOHOL          | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                  | NOAEL Not available |                        |
| ISOPROPYL ALCOHOL          | Inhalation | auditory system                   | Not classified   | Guinea pig             | NOAEL 13.4 mg/l     | 24 hours               |
| ISOPROPYL ALCOHOL          | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Human                  | NOAEL Not available | poisoning and/or abuse |
| 2-ETHYL-4-METHYL-IMIDAZOLE | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available |                        |

### Specific Target Organ Toxicity - repeated exposure

| Name  | Route      | Target Organ(s)  | Value  | Species                 | Test Result           | Exposure Duration      |
|---|------------|--|--|-------------------------|-----------------------|------------------------|
| 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 through prolonged or repeated exposure            | Human                   | NOAEL Not available   | poisoning and/or abuse |
| TOLUENE   | Inhalation | respiratory system   | Some positive data exist, but the data are not sufficient for classification | Rat                     | LOAEL 2.3 mg/l        | 15 months              |
| TOLUENE   | Inhalation | heart   liver   kidney and/or bladder  | Not classified   | Rat                     | NOAEL 11.3 mg/l       | 15 weeks               |
| TOLUENE   | Inhalation | endocrine system   | Not classified   | Rat                     | NOAEL 1.1 mg/l        | 4 weeks                |
| TOLUENE   | Inhalation | immune system  | Not classified   | Mouse                   | NOAEL Not available   | 20 days                |
| TOLUENE   | Inhalation | bone, teeth, nails, and/or hair  | Not classified   | Mouse                   | NOAEL 1.1 mg/l        | 8 weeks                |
| TOLUENE   | Inhalation | hematopoietic system   vascular system   | Not classified   | Human                   | NOAEL Not available   | occupational exposure  |
| TOLUENE   | Inhalation | gastrointestinal tract   | Not classified   | Multiple animal species | NOAEL 11.3 mg/l       | 15 weeks               |
| TOLUENE   | Ingestion  | nervous system   | Some positive data exist, but the data are not sufficient for classification | Rat                     | NOAEL 625 mg/kg/day   | 13 weeks               |
| TOLUENE   | Ingestion  | heart  | Not classified   | Rat                     | NOAEL 2,500 mg/kg/day | 13 weeks               |
| TOLUENE   | Ingestion  | liver   kidney and/or bladder  | Not classified   | Multiple animal species | NOAEL 2,500 mg/kg/day | 13 weeks               |
| TOLUENE   | Ingestion  | hematopoietic system   | Not classified   | Mouse                   | NOAEL 600 mg/kg/day   | 14 days                |
| TOLUENE   | Ingestion  | endocrine system   | Not classified   | Mouse                   | NOAEL 105 mg/kg/day   | 28 days                |
| TOLUENE   | Ingestion  | immune system  | Not classified   | Mouse                   | NOAEL 105 mg/kg/day   | 4 weeks                |
| 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                |

|                            |            |  |                |       |                     |                       |
|----------------------------|------------|--|----------------|-------|---------------------|-----------------------|
| N-BUTYL GLYCIDYL ETHER     | Dermal     | liver  | Not classified | Rat   | LOAEL 100 mg/kg/day | 28 days               |
| N-BUTYL GLYCIDYL ETHER     | Inhalation | kidney and/or bladder   respiratory system   | Not classified | Rat   | NOAEL 1.6 mg/l      | 50 days               |
| N-BUTYL GLYCIDYL ETHER     | Inhalation | hematopoietic system   | Not classified | Rat   | NOAEL 1 mg/l        | 28 days               |
| N-BUTYL GLYCIDYL ETHER     | Inhalation | liver  | Not classified | Rat   | NOAEL 0.8 mg/l      | 50 days               |
| ISOPROPYL ALCOHOL          | Inhalation | kidney and/or bladder  | Not classified | Rat   | NOAEL 12.3 mg/l     | 24 months             |
| ISOPROPYL ALCOHOL          | Inhalation | nervous system   | Not classified | Rat   | NOAEL 12 mg/l       | 13 weeks              |
| ISOPROPYL ALCOHOL          | Ingestion  | kidney and/or bladder  | Not classified | Rat   | NOAEL 400 mg/kg/day | 12 weeks              |
| SILICA                     | Inhalation | respiratory system   silicosis   | Not classified | Human | NOAEL Not available | occupational exposure |
| 2-ETHYL-4-METHYL-IMIDAZOLE | Ingestion  | heart   hematopoietic system   liver   kidney and/or bladder   respiratory system   skin   endocrine system   gastrointestinal tract   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   vascular system | Not classified | Rat   | NOAEL 230 mg/kg/day | 90 days               |

**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.

Incinerate uncured product in a permitted waste incineration facility. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

## 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

Flammable (gases, aerosols, liquids, or solids)

##### Health Hazards

Carcinogenicity

Germ cell mutagenicity

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)

#### Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

| <u>Ingredient</u> | <u>C.A.S. No</u> | <u>% by Wt</u>       |
|-------------------|------------------|----------------------|
| TOLUENE           | 108-88-3         | Trade Secret 30 - 60 |
| ISOPROPYL ALCOHOL | 67-63-0          | Trade Secret 1 - 5   |

### 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

The components of this product are in compliance with the new substance notification requirements of CEPA.

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: 3 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.

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
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