



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Epoxy Adhesive 105 Clear, Part B

Product Identification Numbers

62-3287-8530-8

1.2. Recommended use and restrictions on use

Intended Use

Structural adhesive

Restrictions on use

Not applicable

1.3. Supplier's details

| | |
|-------------------|--|
| Company: | 3M Canada Company |
| Division: | Industrial Adhesives and Tapes Division |
| Address: | 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1 |
| Telephone: | (800) 364-3577 |
| Website: | www.3M.ca |

1.4. Emergency telephone number

Medical Emergency Telephone: 1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms



Hazard statements

Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary statements

Prevention:

Avoid breathing dust/fume/gas/mist/vapours/spray. Wear protective gloves and eye/face protection. Wash exposed skin 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.

Disposal:

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt | Common Name |
|---|------------|--------------------------|---|
| Epoxy Resin | 30583-72-3 | 70 - 80 Trade Secret * | Cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | 25068-38-6 | 15 - 24 Trade Secret * | Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane |
| Organosilane | 2530-83-8 | 0.5 - 1.5 Trade Secret * | Silane, trimethoxy[3-(oxiranylethoxy)propyl]- |

*The actual concentration of this ingredient 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.

Hazardous Decomposition or By-Products**Substance**

Aldehydes

Hydrocarbons

Carbon monoxide

Carbon dioxide

Hydrogen Chloride

Ketones

Toxic Vapor, Gas, Particulate

Condition

During Combustion

During Combustion

During Combustion

During Combustion

During Combustion

During Combustion

During Combustion

5.3. Special protective actions for fire-fighters

Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA). 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 vapours, 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

For industrial or professional use only. Not for consumer sale or use. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls

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

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Safety Glasses with side shields
Indirect Vented Goggles

Skin/hand protection

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

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

If this product is used in a manner that presents a higher potential for exposure (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 vapours and particulates

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | Liquid |
| Specific Physical Form: | Viscous Liquid |
| Colour | Colourless |
| Odour | Slight Epoxy |
| Odour threshold | No Data Available |
| pH | Not Applicable |
| Melting point/Freezing point | Not Applicable |
| Boiling point | No Data Available |
| Flash Point | ≥115.6 °C [Test Method:Pensky-Martens Closed Cup] |
| Evaporation rate | No Data Available |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | No Data Available |
| Flammable Limits(UEL) | No Data Available |
| Vapour Pressure | No Data Available |
| Vapour Density and/or Relative Vapour Density | No Data Available |
| Density | 1.11 g/ml [@ 20 °C] |
| Relative density | Approximately 1.11 [@ 20 °C] [Ref Std:WATER=1] |
| Water solubility | Nil |
| Solubility- non-water | No Data Available |
| Partition coefficient: n-octanol/ water | No Data Available |
| Autoignition temperature | No Data Available |
| Decomposition temperature | No Data Available |
| Viscosity/Kinematic Viscosity | Approximately 5,000 mPa-s [@ 20 °C] |
| Volatile Organic Compounds | 11 g/l [Details:EU VOC content] |
| Percent volatile | < 1 % weight [Test Method:Estimated] |
| VOC Less H2O & Exempt Solvents | < 20 g/l [Test Method:calculated SCAQMD rule 443.1] [Details:when used as intended with Part A] |
| VOC Less H2O & Exempt Solvents | 1.5 % [Test Method:calculated per CARB title 2] [Details:when used as intended with Part A] |
| VOC Less H2O & Exempt Solvents | 11 g/l [Test Method:calculated SCAQMD rule 443.1] [Details:as supplied] |
| Molecular weight | No Data Available |

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong acids
Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:

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

Skin Contact:

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

Eye Contact:

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

Ingestion:

May be harmful if swallowed. Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

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 >2,000 - =5,000 mg/kg |
| Epoxy Resin | Dermal | Rat | LD50 > 2,000 mg/kg |
| Epoxy Resin | Ingestion | Rat | LD50 > 2,000 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 |
| Organosilane | Dermal | Rabbit | LD50 4,000 mg/kg |
| Organosilane | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 5.3 mg/l |
| Organosilane | Ingestion | Rat | LD50 7,010 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|---------|--------------------|
| Epoxy Resin | Rabbit | Minimal irritation |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Rabbit | Mild irritant |
| Organosilane | Rabbit | Mild irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|---------|-------------------|
| Epoxy Resin | Rabbit | Mild irritant |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Rabbit | Moderate irritant |
| Organosilane | Rabbit | Corrosive |

Skin Sensitization

| Name | Species | Value |
|---|------------------|----------------|
| Epoxy Resin | Mouse | Sensitizing |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Human and animal | Sensitizing |
| Organosilane | Guinea pig | Not classified |

Respiratory Sensitization

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

Germ Cell Mutagenicity

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

Carcinogenicity

| Name | Route | Species | Value |
|---|--------|---------|--|
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Organosilane | Dermal | Mouse | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|-----------|--|---------|---------------------|-------------------|
| Epoxy Resin | Ingestion | Not classified for development | Rat | NOAEL 300 mg/kg/day | during gestation |
| 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- | Dermal | Not classified for development | Rabbit | NOAEL 300 | during |

| | | | | | |
|---|-----------|--|-----|-----------------------|----------------------|
| epichlorohydrin polymer | | | | mg/kg/day | organogenesis |
| 4,4'-isopropylidenediphenol-epichlorohydrin polymer | Ingestion | Not classified for development | Rat | NOAEL 750 mg/kg/day | 2 generation |
| Organosilane | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| Organosilane | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| Organosilane | Ingestion | Not classified for development | Rat | NOAEL 3,000 mg/kg/day | during organogenesis |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|---|-----------|--|--|---------|-----------------------|-------------------|
| Epoxy Resin | Ingestion | kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 100 mg/kg/day | 90 days |
| Epoxy Resin | Ingestion | heart endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system vascular system skin muscles eyes respiratory system | Not classified | Rat | NOAEL 600 mg/kg/day | 90 days |
| 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 |
| Organosilane | Ingestion | heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |

Aspiration Hazard

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

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

SECTION 12: Ecological information

No data available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

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

SECTION 14: Transport Information

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

Global inventory status

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

SECTION 16: Other information

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.

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.

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3M Canada SDSs are available at www.3M.ca