

Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M[™] Scotch-Weld[™] Epoxy Adhesive 2216 Translucent Part A

| Product Identification Numbers | | | | | |
|--------------------------------|------------------|----------------|------------------|--|--|
| ID Number | UPC | ID Number | UPC | | |
| 62-3608-8535-4 | 00-21200-64981-3 | 62-3608-9530-4 | 00-21200-20927-7 | | |

7000046494, 7010330240

1.2. Recommended use and restrictions on use

Recommended use Part a of two part epoxy adhesive, Structural adhesive

| 1.3. Supplier's details | |
|-------------------------|-----------------------------------------|
| MANUFACTURER: | 3M |
| DIVISION: | Industrial Adhesives and Tapes Division |
| 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

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2A. Skin Corrosion/Irritation: Category 2. Skin Sensitizer: Category 1A. Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements Signal word Warning

Symbols Exclamation mark | **Pictograms**



Hazard Statements Causes serious eye irritation. Causes skin irritation. May cause an allergic skin reaction. May cause drowsiness or dizziness.

Precautionary Statements

Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves and eye/face protection. 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 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 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.

Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

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

Disposal:

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

Supplemental Information:

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

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|-----------------------------------------------|------------|------------------------|
| Aliphatic Polymer Diamine | 68911-25-1 | 95 - 99 Trade Secret * |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | 4246-51-9 | 1 - 5 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). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

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 | <u>Condition</u> |
|--------------------|-------------------|
| Amine Compounds | During Combustion |
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Oxides of Nitrogen | During Combustion |

5.3. Special protective actions for fire-fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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

7.2. Conditions for safe storage including any incompatibilities

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

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 | Amber |
| Specific Physical Form: | Viscous |
| Odor | Pungent Odor |
| Odor threshold | No Data Available |
| pH | Not Applicable |
| Melting point | Not Applicable |
| Boiling Point | Not Applicable |
| Flash Point | >=94 °C [<i>Test Method</i> :Pensky-Martens Closed Cup] |
| Evaporation rate | Not Applicable |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | No Data Available |
| Flammable Limits(UEL) | No Data Available |
| Vapor Pressure | <=0.01 mmHg [@ 20 °C] |
| Vapor Density | Not Applicable |
| Density | 0.97 g/ml |
| Specific Gravity | 0.970 [<i>Ref Std</i> :WATER=1] |
| Solubility in Water | 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 | 7,000 centipoise [@ 73.4 °F] [Details: MITS data] |
| Hazardous Air Pollutants | < 0.3 % weight [<i>Test Method</i> :Calculated] |
| Molecular weight | No Data Available |
| VOC Less H2O & Exempt Solvents | 3.9 g/l [<i>Test Method</i> :calculated SCAQMD rule 443.1] |
| - | [Details:when used as intended with Part B] |
| VOC Less H2O & Exempt Solvents | <pre>< 10 g/l [Test Method:calculated SCAQMD rule 443.1]</pre> |
| • | [Details:as supplied] |
| VOC Less H2O & Exempt Solvents | 0.4 % [Test Method:calculated SCAQMD rule 443.1] |
| - | [Details: when used as intended with Part B] |
| | |

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 oxidizing agents

10.6. Hazardous decomposition products

_

None known.

Substance

Condition

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:

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

Eye Contact:

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

Ingestion:

May be harmful if swallowed.

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

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.

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 >5,000 mg/kg |

| Overall product | Ingestion | | No data available; calculated ATE $\geq 2,000 - \leq 5,000$ |
|-----------------------------------------------|-----------|--------|-------------------------------------------------------------|
| | | | mg/kg |
| Aliphatic Polymer Diamine | Dermal | Rat | LD50 > 2,000 mg/kg |
| Aliphatic Polymer Diamine | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | Dermal | Rabbit | LD50 2,500 mg/kg |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | Ingestion | Rat | LD50 3,160 mg/kg |
| $\Delta TE = aguta tarrigity actimata$ | | | |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|-----------------------------------------------|---------|-----------|
| | | |
| Overall product | Rat | Irritant |
| Aliphatic Polymer Diamine | Rat | Irritant |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | Rabbit | Corrosive |

Serious Eye Damage/Irritation

| Name | Species | Value |
|-----------------------------------------------|----------|-----------------|
| | | |
| Overall product | In vitro | Severe irritant |
| | data | |
| Aliphatic Polymer Diamine | In vitro | Severe irritant |
| | data | |
| Bis(3-Aminopropyl) Ether Of Diethylene Glycol | similar | Corrosive |
| | health | |
| | hazards | |

Skin Sensitization

| Name | Species | Value |
|---------------------------|---------|-------------|
| Aliphatic Polymer Diamine | Guinea | Sensitizing |
| | pig | |

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 |

Carcinogenicity

For the component/components, either no data are currently available or 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 | premating |
| | | | | mg/kg/day | 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 | premating |
| | _ | | | mg/kg/day | into lactation |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|-----------------|------------|------------------------|---------------------------------------------------------------|-------------------|------------------------|----------------------|
| Overall product | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for | similar health | Irritation Positive | |

| | | | classification | hazards | | |
|---------------------------|------------|------------------------|---------------------------------------------------------------|-------------------|------------------------|--|
| Aliphatic Polymer Diamine | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for | similar health | Irritation Positive | |
| | | | | | Positive | |
| | | | classification | hazards | | |
| Aliphatic Polymer Diamine | Ingestion | central nervous | May cause drowsiness or | Rat | NOAEL Not | |
| | | system depression | dizziness | | available | |
| Bis(3-Aminopropyl) Ether | Inhalation | respiratory irritation | Some positive data exist, but the | | NOAEL Not | |
| Of Diethylene Glycol | | | data are not sufficient for | | available | |
| | | | classification | | | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---------------------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------|-----------------------------|----------------------|
| Aliphatic Polymer Diamine | Ingestion | heart skin endocrine system gastrointestinal tract bone, teeth, nails, and/or hair hematopoietic system liver immune system muscles nervous system eyes kidney and/or bladder respiratory system vascular system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 29 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

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. 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): Not regulated

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:

| Pł | ly: | sical | Ha | zards | 5 |
|------|-----|-------|----|-------|---|
| N.T. | | 1. | 1 | 1 | |

Not applicable

Health Hazards

| 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: 2 Flammability: 1 Instability: 1 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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