



Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 24-3529-5 | Version Number: | 3.00 |
| Issue Date: | 07/19/17 | Supersedes Date: | 05/04/17 |

Product identifier

3M™ Scotch-Weld™ Structural Adhesive 7246-2 B/A FST Kit

ID Number(s):

LC-B100-1060-7, FS-9100-4403-1, FS-9100-4404-9

Recommended use

Structural adhesive

Supplier's details

| | |
|----------------------|---|
| MANUFACTURER: | 3M |
| DIVISION: | Automotive and Aerospace Solutions Division |

| | |
|-------------------|---|
| ADDRESS: | 3M Center, St. Paul, MN 55144-1000, USA |
| Telephone: | 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:

24-3527-9, 24-3526-1

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| Document Group: | 24-3527-9 | Version Number: | 3.01 |
| Issue Date: | 05/04/17 | Supersedes Date: | 09/08/15 |

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Structural Adhesive 7246-2 B/A FST Part A

Product Identification Numbers

LC-B100-0419-5

1.2. Recommended use and restrictions on use

Recommended use

Part A of two part epoxy adhesive

1.3. Supplier's details

| | |
|----------------------|--|
| MANUFACTURER: | 3M |
| DIVISION: | Automotive and Aerospace Solutions Division 3M France |
| 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

Flammable Liquid: Category 4.
 Serious Eye Damage/Irritation: Category 1.
 Skin Corrosion/Irritation: Category 1.
 Skin Sensitizer: Category 1A.
 Reproductive Toxicity: Category 1B.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark | Health Hazard |

Pictograms**Hazard Statements**

Combustible liquid.

Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.

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.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves, protective clothing, 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 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.
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 cool.
Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

62% of the mixture consists of ingredients of unknown acute oral toxicity.
64% 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 | 0 - 50 Trade Secret * |
| POLYMERIC DIAMIDE | 68541-13-9 | 0 - 50 Trade Secret * |

| | | |
|---|---------------|------------------------|
| ALUMINA TRIHYDRATE | 21645-51-2 | 20 - 40 |
| BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL | 4246-51-9 | 0 - 10 Trade Secret * |
| ORGANOPHOSPHOROUS SALT | 225789-38-8 | 3 - 7 |
| INORGANIC CALCIUM SALT | 13477-34-4 | 1 - 5 Trade Secret * |
| TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL | 90-72-2 | 0 - 5 Trade Secret * |
| AMINE TERMINATED POLYMER | Trade Secret* | 1 - 5 |
| N-AMINOETHYLPIPERAZINE | 140-31-8 | 0.1 - 1 Trade Secret * |
| TOLUENE | 108-88-3 | < 0.5 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 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

See Section 11.1. Information on toxicological effects.

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

Carbon monoxide
Carbon dioxide
Irritant Vapors or Gases
Oxides of Nitrogen

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.

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

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 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.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid skin contact with hot material. For industrial or professional use only. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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.) 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 cool. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits**

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

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|-------------------------------|------------|--------|----------------------------------|--------------------------------|
| TOLUENE | 108-88-3 | ACGIH | TWA:20 ppm | A4: Not class. as human carcin |
| TOLUENE | 108-88-3 | OSHA | TWA:200 ppm;CEIL:300 ppm | |
| Aluminum, insoluble compounds | 21645-51-2 | ACGIH | TWA(respirable fraction):1 mg/m3 | A4: Not class. as human carcin |

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 (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.

Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--------------------------------|--|
| General Physical Form: | Liquid |
| Specific Physical Form: | Paste |
| Odor, Color, Grade: | Non-sagging, off-white paste with amine odor |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>No Data Available</i> |
| Boiling Point | <i>Not Applicable</i> |
| Flash Point | >=90 °C [<i>Test Method: Closed Cup</i>] |

| | |
|---|--------------------------------|
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapor Pressure | <i>Not Applicable</i> |
| Vapor Density | <i>Not Applicable</i> |
| Density | 1.20 - 1.30 g/ml |
| Specific Gravity | 1.20 - 1.30 [Ref Std: WATER=1] |
| Solubility in Water | Nil |
| Solubility- non-water | <i>No Data Available</i> |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | 100 - 150 Pa-s [@ 23 °C] |
| Volatile Organic Compounds | <i>Not Applicable</i> |
| Percent volatile | <=1 % |
| VOC Less H2O & Exempt Solvents | <i>Not Applicable</i> |

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Strong acids

Strong bases

Strong oxidizing agents

Strong oxidizing agents

10.6. Hazardous decomposition products

Substance

None known.

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.

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.

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:

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:

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 >5,000 mg/kg |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| ALUMINA TRIHYDRATE | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| ALUMINA TRIHYDRATE | Ingestion | Rat | LD50 > 5,000 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 |
| ORGANOPHOSPHOROUS SALT | Dermal | Rat | LD50 > 2,000 mg/kg |
| ORGANOPHOSPHOROUS SALT | Ingestion | Rat | LD50 > 2,000 mg/kg |
| AMINE TERMINATED POLYMER | Dermal | Rabbit | LD50 > 3,000 mg/kg |
| AMINE TERMINATED POLYMER | Ingestion | Rat | LD50 > 15,300 mg/kg |
| INORGANIC CALCIUM SALT | Ingestion | Rat | LD50 >300, <2000 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 |
| INORGANIC CALCIUM SALT | Dermal | similar | LD50 > 2,000 mg/kg |

| | | | |
|------------------------|----------------------------|-----------|-------------------|
| | | compounds | |
| 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 |
| N-AMINOETHYLPIPERAZINE | Dermal | Rabbit | LD50 865 mg/kg |
| N-AMINOETHYLPIPERAZINE | Ingestion | Rat | LD50 1,470 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|-------------------|---------------------------|
| POLYMERIC DIAMIDE | Rabbit | Irritant |
| ALIPHATIC POLYMER DIAMINE | Rabbit | Irritant |
| ALUMINA TRIHYDRATE | Rabbit | No significant irritation |
| BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL | Rabbit | Corrosive |
| INORGANIC CALCIUM SALT | similar compounds | No significant irritation |
| TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL | Rabbit | Corrosive |
| TOLUENE | Rabbit | Irritant |
| N-AMINOETHYLPIPERAZINE | Rabbit | Corrosive |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|------------------------|---------------------------|
| POLYMERIC DIAMIDE | similar health hazards | Corrosive |
| ALIPHATIC POLYMER DIAMINE | similar health hazards | Corrosive |
| ALUMINA TRIHYDRATE | Rabbit | No significant irritation |
| BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL | similar health hazards | Corrosive |
| INORGANIC CALCIUM SALT | Rabbit | Corrosive |
| TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL | Rabbit | Corrosive |
| TOLUENE | Rabbit | Moderate irritant |
| N-AMINOETHYLPIPERAZINE | Rabbit | Corrosive |

Skin Sensitization

| Name | Species | Value |
|---|-------------------|----------------|
| POLYMERIC DIAMIDE | Guinea pig | Sensitizing |
| ALIPHATIC POLYMER DIAMINE | Guinea pig | Sensitizing |
| ALUMINA TRIHYDRATE | Guinea pig | Not classified |
| AMINE TERMINATED POLYMER | Guinea pig | Not classified |
| INORGANIC CALCIUM SALT | similar compounds | Not classified |
| TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL | Guinea pig | Not classified |
| TOLUENE | Guinea pig | Not classified |
| N-AMINOETHYLPIPERAZINE | Guinea pig | Sensitizing |

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 |
|---|----------|--|
| INORGANIC CALCIUM SALT | In Vitro | Not mutagenic |
| TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL | In Vitro | Not mutagenic |
| TOLUENE | In Vitro | Not mutagenic |
| TOLUENE | 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 |

Carcinogenicity

| Name | Route | Species | Value |
|--------------------|---------------|-------------------------|--|
| ALUMINA TRIHYDRATE | Not Specified | Multiple animal species | Not 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 |
|------------------------|------------|--|-------------------|-----------------------|--------------------------------|
| ALUMINA TRIHYDRATE | Ingestion | Not classified for development | Rat | NOAEL 768 mg/kg/day | during organogenesis |
| INORGANIC CALCIUM SALT | Ingestion | Not classified for female reproduction | similar compounds | NOAEL 1,500 mg/kg/day | prematuring into lactation |
| INORGANIC CALCIUM SALT | Ingestion | Not classified for male reproduction | similar compounds | NOAEL 1,500 mg/kg/day | 28 days |
| INORGANIC CALCIUM SALT | Ingestion | Not classified for development | similar compounds | NOAEL 1,500 mg/kg/day | prematuring into lactation |
| 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 |
| N-AMINOETHYLPIPERAZINE | Ingestion | Not classified for female reproduction | Rat | NOAEL 598 mg/kg/day | prematuring & during gestation |
| N-AMINOETHYLPIPERAZINE | Ingestion | Not classified for male reproduction | Rat | NOAEL 409 mg/kg/day | 32 days |
| N-AMINOETHYLPIPERAZINE | Ingestion | Not classified for development | Rat | NOAEL 899 mg/kg/day | prematuring & during gestation |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|------|-------|-----------------|-------|---------|-------------|-------------------|
|------|-------|-----------------|-------|---------|-------------|-------------------|

| | | | | | | |
|---|------------|-----------------------------------|--|------------------------|---------------------|------------------------|
| BIS(3-AMINOPROPYL) ETHER OF DIETHYLENE GLYCOL | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| INORGANIC CALCIUM SALT | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | similar health hazards | NOAEL Not available | |
| TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | 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 |
| N-AMINOETHYLPIPERAZINE | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---|------------|---|--|-------------------|-----------------------|------------------------|
| INORGANIC CALCIUM SALT | Ingestion | heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system eyes kidney and/or bladder respiratory system vascular system | Not classified | similar compounds | NOAEL 1,500 mg/kg/day | 28 days |
| TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL | Dermal | skin liver nervous system auditory system hematopoietic system eyes | Not classified | Rat | NOAEL 125 mg/kg/day | 28 days |
| TOLUENE | Inhalation | auditory system nervous system eyes olfactory system | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | poisoning and/or abuse |
| TOLUENE | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat | LOAEL 2.3 mg/l | 15 months |
| TOLUENE | Inhalation | heart liver kidney and/or bladder | Not classified | Rat | NOAEL 11.3 mg/l | 15 weeks |
| TOLUENE | Inhalation | endocrine system | Not classified | Rat | NOAEL 1.1 mg/l | 4 weeks |
| TOLUENE | Inhalation | immune system | Not classified | Mouse | NOAEL Not available | 20 days |
| TOLUENE | Inhalation | bone, teeth, nails, and/or hair | Not classified | Mouse | NOAEL 1.1 mg/l | 8 weeks |
| TOLUENE | Inhalation | hematopoietic system vascular system | Not classified | Human | NOAEL Not available | occupational exposure |
| TOLUENE | 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 | Not classified | Multiple | NOAEL | 13 weeks |

| | | | | | | |
|------------------------|-----------|--|----------------|----------------|---------------------|---------|
| | | bladder | | animal species | 2,500 mg/kg/day | |
| 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 |
| N-AMINOETHYLPIPERAZINE | Ingestion | heart endocrine system hematopoietic system liver nervous system kidney and/or bladder | Not classified | Rat | NOAEL 598 mg/kg/day | 28 days |

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. Dispose of completely cured (or polymerized) material in a permitted industrial waste 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): D018 (Benzene)

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

Issue Date: 05/04/17

Supersedes Date: 09/08/15

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Safety Data Sheet

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| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 24-3526-1 | Version Number: | 4.00 |
| Issue Date: | 07/19/17 | Supersedes Date: | 05/04/17 |

SECTION 1: Identification

1.1. Product identifier

3M™ Scotch-Weld™ Structural Adhesive 7246-2 B/A FST Part B

Product Identification Numbers

LC-B100-0419-3, LC-B100-0419-2

1.2. Recommended use and restrictions on use

Recommended use

Part B of two part epoxy adhesive

1.3. Supplier's details

| | |
|----------------------|--|
| MANUFACTURER: | 3M |
| DIVISION: | Automotive and Aerospace Solutions Division 3M France |
| 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

Flammable Liquid: Category 4.
Serious Eye Damage/Irritation: Category 2A.
Skin Sensitizer: Category 1.

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms

**Hazard Statements**

Combustible liquid.

Causes serious eye irritation.

May cause an allergic skin reaction.

Precautionary Statements**Prevention:**

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

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.

Wash contaminated clothing before reuse.

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 cool.

Disposal:

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

2.3. Hazards not otherwise classified

4% of the mixture consists of ingredients of unknown acute oral toxicity.

4% of the mixture consists of ingredients of unknown acute dermal toxicity.

88% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|---------------|------------------------|
| Alumina Trihydrate | 21645-51-2 | 40 - 60 |
| Phenol-Formaldehyde Polymer Glycidyl Ether | 28064-14-4 | 10 - 20 Trade Secret * |
| 4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer | 25068-38-6 | 5 - 15 Trade Secret * |
| 1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | 14228-73-0 | 7 - 13 Trade Secret * |
| Organophosphorous salt | 225789-38-8 | 3 - 7 |
| Acrylic copolymer | Trade Secret* | 0 - 5 |
| STYRENE, POLYMER WITH 1,3-BUTADIENE, BUTYL ACRYLATE AND METHYL | Trade Secret* | 0 - 5 |

| | | |
|---|-----------|--------------------|
| METHACRYLATE | | |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | 2530-83-8 | < 3 Trade Secret * |
| Silane, triethoxy[3-(oxiranylmethoxy)propyl]- | 2602-34-8 | < 3 |

*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

See Section 11.1. Information on toxicological effects.

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.

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

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 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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin contact with hot material. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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 cool. Store away from heat. 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 |
|-------------------------------|------------|--------|---|--------------------------------|
| DUST, INERT OR NUISANCE | 21645-51-2 | OSHA | TWA(as total dust):15 mg/m3;TWA(as total dust):50 millions of particles/cu. ft.(15 mg/m3);TWA(respirable fraction):15 millions of particles/cu. ft.(5 mg/m3);TWA(respirable fraction):5 mg/m3 | |
| Aluminum, insoluble compounds | 21645-51-2 | ACGIH | TWA(respirable fraction):1 mg/m3 | A4: Not class. as human carcin |

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.

Thermal hazards

Wear heat insulating gloves when handling hot material to prevent thermal burns.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|----------------------------------|---|
| General Physical Form: | Liquid |
| Specific Physical Form: | Paste |
| Odor, Color, Grade: | low-sagging off-white paste with typical epoxy odor |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>No Data Available</i> |
| Boiling Point | <i>Not Applicable</i> |
| Flash Point | ≥93 °C [<i>Test Method: Closed Cup</i>] |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Applicable |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapor Pressure | <i>Not Applicable</i> |

| | |
|---|--------------------------------|
| Vapor Density | No Data Available |
| Density | 1.45 - 1.55 g/ml |
| Specific Gravity | 1.45 - 1.55 [Ref Std: 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 | 150 - 200 Pa-s [@ 23 °C] |
| Volatile Organic Compounds | Not Applicable |
| Percent volatile | <=1 % |
| VOC Less H2O & Exempt Solvents | Not Applicable |

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

10.5. Incompatible materials

Amines

Strong oxidizing agents

10.6. Hazardous decomposition products

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

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

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 | Inhalation-Dust/Mist(4 hr) | | No data available; calculated ATE >12.5 mg/l |
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Alumina Trihydrate | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Alumina Trihydrate | Ingestion | Rat | LD50 > 5,000 mg/kg |
| Phenol-Formaldehyde Polymer Glycidyl Ether | Dermal | Rabbit | LD50 > 6,000 mg/kg |
| Phenol-Formaldehyde Polymer Glycidyl Ether | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 1.7 mg/l |
| Phenol-Formaldehyde Polymer Glycidyl Ether | Ingestion | Rat | LD50 > 4,000 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 |
| 1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Dermal | Rabbit | LD50 2,500 mg/kg |
| 1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Ingestion | Rat | LD50 2,450 mg/kg |
| Organophosphorous salt | Dermal | Rat | LD50 > 2,000 mg/kg |
| Organophosphorous salt | Ingestion | Rat | LD50 > 2,000 mg/kg |
| STYRENE, POLYMER WITH 1,3-BUTADIENE, BUTYL ACRYLATE AND METHYL METHACRYLATE | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| STYRENE, POLYMER WITH 1,3-BUTADIENE, BUTYL ACRYLATE AND METHYL METHACRYLATE | Ingestion | Rat | LD50 > 5,000 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 |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---|------------------------|---------------------------|
| Alumina Trihydrate | Rabbit | No significant irritation |
| Phenol-Formaldehyde Polymer Glycidyl Ether | Rabbit | Minimal irritation |
| 4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer | Rabbit | Mild irritant |
| 1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Professional judgement | Mild irritant |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | Rabbit | Mild irritant |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|------------------------|---------------------------|
| Alumina Trihydrate | Rabbit | No significant irritation |
| Phenol-Formaldehyde Polymer Glycidyl Ether | Rabbit | Mild irritant |
| 4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer | Rabbit | Moderate irritant |
| 1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | Professional judgement | Mild irritant |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | Rabbit | Corrosive |

Skin Sensitization

| Name | Species | Value |
|---|-------------------|----------------|
| Alumina Trihydrate | Guinea pig | Not classified |
| Phenol-Formaldehyde Polymer Glycidyl Ether | Human and animal | Sensitizing |
| 4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer | Human and animal | Sensitizing |
| 1,4-Bis[(2,3-Epoxypropoxy)Methyl]Cyclohexane | similar compounds | Sensitizing |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | Guinea pig | Not classified |

Respiratory Sensitization

| Name | Species | Value |
|---|---------|----------------|
| 4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer | Human | Not classified |

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|--|
| Phenol-Formaldehyde Polymer Glycidyl Ether | 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 |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | In vivo | Not mutagenic |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|---|---------------|-------------------------|--|
| Alumina Trihydrate | Not Specified | Multiple animal species | Not carcinogenic |
| 4,4'-Isopropylidenediphenol-Epichlorohydrin Polymer | Dermal | Mouse | Some positive data exist, but the data are not sufficient for classification |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | Dermal | Mouse | Not carcinogenic |

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

| Name | Route | Value | Species | Test Result | Exposure Duration |
|--------------------|-----------|--------------------------------|---------|---------------------|----------------------|
| Alumina Trihydrate | Ingestion | Not classified for development | Rat | NOAEL 768 mg/kg/day | during organogenesis |

| | | | | | |
|---|-----------|--|--------|-----------------------|----------------------|
| 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 |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | Ingestion | Not classified for female reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | Ingestion | Not classified for male reproduction | Rat | NOAEL 1,000 mg/kg/day | 1 generation |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | Ingestion | Not classified for development | Rat | NOAEL 3,000 mg/kg/day | during organogenesis |

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 | | NOAEL Not available | |

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 |
| 3-(Trimethoxysilyl) Propyl Glycidyl Ether | 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

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. 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.

311/312 Hazard Categories:

Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

EPCRA 311/312 Hazard Classifications (effective January 1, 2018):

Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

Health Hazards

Serious eye damage or eye irritation

This material contains a chemical which requires export notification under TSCA Section 12[b]:

| <u>Ingredient (Category if applicable)</u> | <u>C.A.S. No</u> | <u>Regulation</u> | <u>Status</u> |
|--|------------------|---|---------------|
| Silane, triethoxy[3-(oxiranylethoxy)propyl]- | 2602-34-8 | Toxic Substances Control Act (TSCA) 5 SNUR or Consent Order Chemicals | Applicable |

This material contains a chemical regulated by an EPA Significant New Use Rule (TSCA Section 5)

| <u>Ingredient (Category if applicable)</u> | <u>C.A.S. No</u> | <u>Reference</u> |
|---|------------------|------------------|
| Silane, triethoxy[3-(oxiranylmethoxy)propyl]- | 2602-34-8 | 40 CFR 721.9501 |

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.

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: 2 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.

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 24-3526-1 | Version Number: | 4.00 |
| Issue Date: | 07/19/17 | Supercedes Date: | 05/04/17 |

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