Safety Data Sheet

Document Group:	10-8122-3	**Version Number:**	22.04
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SECTION 1: Identification

1.1. Product identifier
3M™ Scotch-Weld™ Structural Core Splice Adhesive Film AF 3002

Product Identification Numbers
62-3002-0456-7, 62-3002-3501-7, 62-3002-4703-8, 62-3002-4705-3, 87-2500-0387-5
7010365974, 7010329568, 7010309764, 7010365976

1.2. Recommended use and restrictions on use

Recommended use
Structural Adhesive Film

1.3. 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)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification
Respiratory Sensitizer: Category 1.

2.2. Label elements
Signal word
Danger

Symbols
Health Hazard |

Pictograms

Hazard Statements
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements

Prevention:
Avoid breathing dust/fume/gas/mist/vapors/spray.
In case of inadequate ventilation wear respiratory protection.

Response:
IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Epoxy Resin	28064-14-4	40 - 70 Trade Secret *
Glass Bubbles	65997-17-3	10 - 30
Synthetic Elastomer	Trade Secret*	7 - 13
Amorphous Silica	112945-52-5	1 - 5
Dicyandiamide	461-58-5	1 - 5
Clay	Trade Secret*	1 - 5
3-(p-Chlorophenyl)-1,1-Dimethylurea	150-68-5	< 1 Trade Secret *
Dinitrosopentamethylenetetramine	101-25-7	< 1 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:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, 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
No critical symptoms or effects. 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 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	Condition
Formaldehyde	During Combustion
Chlorine	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Ammonia	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. 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.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. 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
SILICA, AMORPHOUS	112945-52-5	OSHA	TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3	
3-(p-Chlorophenyl)-1,1-Dimethylurea	150-68-5	Manufacturer determined	TWA(Inhalable aerosol)(8 hours):1 mg/m3	
CERAMIC FIBERS	65997-17-3	ACGIH	TWA(as fiber):0.2 fiber/cc	A2: Suspected human carcin.
CONTINUOUS FILAMENT GLASS FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A4: Not class. as human carcin
CONTINUOUS FILAMENT GLASS FIBERS, INHALABLE FRACTION	65997-17-3	ACGIH	TWA(inhalable fraction):5 mg/m3	A4: Not class. as human carcin
Glass Bubbles	65997-17-3	Manufacturer determined	TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3	
GLASS WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcin.
ROCK WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcin.
SLAG WOOL FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal carcin.
SPECIAL PURPOSE GLASS FIBERS	65997-17-3	ACGIH	TWA(as fiber):1 fiber/cc	A3: Confirmed animal 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
Provide ventilated enclosure for curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
None required.

Skin/hand protection
No protective gloves required.

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	Solid
Color	Off-White
Specific Physical Form:	Film
Odor	Epoxy
Odor threshold	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Boiling Point	*Not Applicable*
Flash Point	No flash point
Evaporation rate	*Not Applicable*
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Density	*Not Applicable*
Density	*No Data Available*
Specific Gravity	*No Data Available*
Solubility in Water	Nil
Solubility- non-water	*No Data Available*
Partition coefficient: n-octanol/ water	*No Data Available*
Autoignition temperature	*Not Applicable*
Decomposition temperature	*No Data Available*
Viscosity	*Not Applicable*
Volatile Organic Compounds	*Not Applicable*
Percent volatile	Nil
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

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:
Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion:
Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

Carcinogenicity:

Ingredient	CAS No.	Class Description	Regulation
Generic: CAS NO SEQ200640	65997-17-3	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Generic: CERAMIC FIBERS	65997-17-3	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Generic: CERAMIC FIBERS	65997-17-3	Anticipated human carcinogen	National Toxicology Program Carcinogens
Generic: GLASS FILAMENTS	65997-17-3	Anticipated human carcinogen	National Toxicology Program Carcinogens

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	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
Epoxy Resin	Dermal	Rabbit	LD50 > 6,000 mg/kg
Epoxy Resin	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 1.7 mg/l
Epoxy Resin	Ingestion	Rat	LD50 > 4,000 mg/kg
Glass Bubbles	Dermal		LD50 estimated to be > 5,000 mg/kg
Glass Bubbles	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Synthetic Elastomer	Dermal	Rabbit	LD50 > 15,000 mg/kg

Synthetic Elastomer	Ingestion	Rat	LD50 > 30,000 mg/kg
Dicyandiamide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Dicyandiamide	Ingestion	Rat	LD50 > 30,000 mg/kg
Clay	Dermal		LD50 estimated to be > 5,000 mg/kg
Clay	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 12.6 mg/l
Clay	Ingestion	Rat	LD50 > 5,000 mg/kg
Amorphous Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Amorphous Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Dinitrosopentamethylenetetramine	Ingestion	Rat	LD50 940 mg/kg
3-(p-Chlorophenyl)-1,1-Dimethylurea	Dermal	Rabbit	LD50 > 2,500 mg/kg
3-(p-Chlorophenyl)-1,1-Dimethylurea	Ingestion	Rat	LD50 1,480 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Overall product	Multiple animal species	No significant irritation
Epoxy Resin	Rabbit	Minimal irritation
Glass Bubbles	Professional judgement	No significant irritation
Synthetic Elastomer	Professional judgement	No significant irritation
Dicyandiamide	Human and animal	Minimal irritation
Clay	Rat	No significant irritation
Amorphous Silica	Rabbit	No significant irritation
3-(p-Chlorophenyl)-1,1-Dimethylurea	similar compounds	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Epoxy Resin	Rabbit	Mild irritant
Glass Bubbles	Professional judgement	No significant irritation
Synthetic Elastomer	Professional judgement	No significant irritation
Dicyandiamide	Professional judgement	Mild irritant
Clay	Rabbit	No significant irritation
Amorphous Silica	Rabbit	No significant irritation
3-(p-Chlorophenyl)-1,1-Dimethylurea	similar compounds	Moderate irritant

Skin Sensitization

Name	Species	Value
Overall product	Guinea pig	Not classified
Epoxy Resin	Human and animal	Sensitizing
Dicyandiamide	Guinea pig	Not classified
Amorphous Silica	Human and animal	Not classified

Respiratory Sensitization

Name	Species	Value
Dinitrosopentamethylenetetramine	Professional judgement	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Epoxy Resin	In Vitro	Some positive data exist, but the data are not sufficient for classification
Glass Bubbles	In Vitro	Some positive data exist, but the data are not sufficient for classification
Dicyandiamide	In Vitro	Not mutagenic
Amorphous Silica	In Vitro	Not mutagenic
Dinitrosopentamethylenetetramine	In vivo	Not mutagenic
Dinitrosopentamethylenetetramine	In Vitro	Some positive data exist, but the data are not sufficient for classification
3-(p-Chlorophenyl)-1,1-Dimethylurea	In Vitro	Some positive data exist, but the data are not sufficient for classification
3-(p-Chlorophenyl)-1,1-Dimethylurea	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
Glass Bubbles	Inhalation	Multiple animal species	Some positive data exist, but the data are not sufficient for classification
Dicyandiamide	Ingestion	Rat	Not carcinogenic
Amorphous Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
3-(p-Chlorophenyl)-1,1-Dimethylurea	Ingestion	Rat	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
Dicyandiamide	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
Dicyandiamide	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	44 days
Dicyandiamide	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
Amorphous Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation

Amorphous Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Amorphous Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
3-(p-Chlorophenyl)-1,1-Dimethylurea	Ingestion	Not classified for development	Mouse	LOAEL 215 mg/kg/day	during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
3-(p-Chlorophenyl)-1,1-Dimethylurea	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar compounds	NOAEL Not available	
3-(p-Chlorophenyl)-1,1-Dimethylurea	Ingestion	methemoglobinemia	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL Not available	not applicable

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Glass Bubbles	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
Dicyandiamide	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 6,822 mg/kg/day	13 weeks
Amorphous Silica	Inhalation	respiratory system | silicosis	Not classified	Human	NOAEL Not available	occupational exposure
3-(p-Chlorophenyl)-1,1-Dimethylurea	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	LOAEL 800 mg/kg/day	103 weeks
3-(p-Chlorophenyl)-1,1-Dimethylurea	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 65 mg/kg/day	103 weeks
3-(p-Chlorophenyl)-1,1-Dimethylurea	Ingestion	immune system	Not classified	Rat	LOAEL 520 mg/kg/day	13 weeks

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:

Physical Hazards
Not applicable

Health Hazards
Respiratory or Skin Sensitization

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

Ingredient	C.A.S. No.	Listing
Silica, crystalline (airborne particles of respirable size)	None	Carcinogen
Ceramic fibers (airborne particles of respirable size)	None	Carcinogen
GLASS WOOL FIBERS (INHALABLE AND BIOPERSISTENT)	None	Carcinogen

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

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

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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