



## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Scotch-Weld™ Structural Adhesive Film AF 563

#### Product Identification Numbers

62-2619-2005-2, 62-2619-2805-5, 62-2619-3505-0, 62-2619-5302-0, 62-2619-5305-3, 62-2619-5309-5, 62-3313-5305-2, 62-3313-5306-0, 62-3313-5309-4, 87-2500-0310-7

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

##### Recommended use

Structural Adhesive Film.

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Aerospace and Commercial Transportation Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

### SECTION 2: Hazard identification

#### 2.1. Hazard classification

Reproductive Toxicity: Category 2.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Health Hazard |

##### Pictograms

**Hazard Statements**

Suspected of damaging 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.

Wear protective gloves.

**Response:**

IF exposed or concerned: Get medical advice/attention.

**Storage:**

Store locked up.

**Disposal:**

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

**2.3. Hazards not otherwise classified**

None.

40% of the mixture consists of ingredients of unknown acute oral toxicity.

### SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
POLYMERIC EPOXY POLYETHER REACTION PRODUCT (M.W. > 700)	Trade Secret*	60 - 100
EPOXY RESIN	25068-38-6	10 - 30 Trade Secret *
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	10 - 30 Trade Secret *
NON VOLATILE AMIDE	Trade Secret*	7 - 13
EPOXY RESIN	14228-73-0	7 - 13 Trade Secret *
1,1'-4(METHYL-M-PHENYLENE)BIS(3,3'-DIMETHYLUREA)	17526-94-2	0.5 - 1.5

\*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 are concerned, get medical advice.

**Skin Contact:**

Wash with soap and water. If signs/symptoms develop, get medical attention.

**Eye Contact:**

No need for first aid is anticipated.

**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**

Non-combustible. Use a fire fighting agent suitable for surrounding fire.

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

None inherent in this product.

**Hazardous Decomposition or By-Products**

<u>Substance</u>	<u>Condition</u>
Chlorine	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Oxides of Nitrogen	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

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

No special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

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.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

For industrial or professional use only. Do not handle until all safety precautions have been read and understood. 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. Avoid release to the environment. Use personal protective equipment (gloves, respirators, etc.) as required.

**7.2. Conditions for safe storage including any incompatibilities**

Store away from acids. Store away from strong bases.

**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
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	CMRG	TWA:5 mg/m3	

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:

Safety Glasses with side shields

**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.

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

**Respiratory protection**

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

<b>General Physical Form:</b>	Solid
<b>Specific Physical Form:</b>	Film
<b>Odor, Color, Grade:</b>	red, odorless.
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>Not Applicable</i>

Melting point	No Data Available
Boiling Point	Not Applicable
Flash Point	250 °F [@ 1 atm] [Test Method: SETAFLASH]
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	Nil
Vapor Density	Nil
Density	1.2 g/cm3
Specific Gravity	1.2 [@ 20 °C] [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	Not Applicable
Volatile Organic Compounds	Not Applicable
Percent volatile	Negligible
VOC Less H2O & Exempt Solvents	Not Applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Not determined

### 10.5. Incompatible materials

Strong bases

Strong acids

### 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:

No health effects are expected.

#### 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.

#### Additional Health Effects:

#### Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

#### 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	Ingestion		No data available; calculated ATE > 5,000 mg/kg
EPOXY RESIN	Dermal	Rat	LD50 > 1,600 mg/kg
EPOXY RESIN	Ingestion	Rat	LD50 > 1,000 mg/kg
4,4'-ISOPROPYLIDENEDIPHENOL	Dermal	Rabbit	LD50 > 2,000 mg/kg
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	Rat	LD50 3,200 mg/kg
EPOXY RESIN	Dermal	Rabbit	LD50 2,500 mg/kg
EPOXY RESIN	Ingestion	Rat	LD50 2,450 mg/kg
1,1'-4(METHYL-M-PHENYLENE)BIS(3,3'-DIMETHYLUREA)	Dermal	Rat	LD50 > 2,000 mg/kg
1,1'-4(METHYL-M-PHENYLENE)BIS(3,3'-DIMETHYLUREA)	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
EPOXY RESIN	Rabbit	Mild irritant
4,4'-ISOPROPYLIDENEDIPHENOL	Rabbit	No significant irritation
EPOXY RESIN	Professional judgement	Mild irritant
1,1'-4(METHYL-M-PHENYLENE)BIS(3,3'-DIMETHYLUREA)	Rabbit	No significant irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
EPOXY RESIN	Rabbit	Moderate irritant
4,4'-ISOPROPYLIDENEDIPHENOL	Rabbit	Corrosive
EPOXY RESIN	Professional judgement	Mild irritant

1,1'-4(METHYL-M-PHENYLENE)BIS(3,3'-DIMETHYLUREA)	Rabbit	No significant irritation
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### Skin Sensitization

Name	Species	Value
EPOXY RESIN	Human and animal	Sensitizing
4,4'-ISOPROPYLIDENEDIPHENOL	official classification	Sensitizing
EPOXY RESIN	similar compounds	Sensitizing

### Photosensitization

Name	Species	Value
4,4'-ISOPROPYLIDENEDIPHENOL	Human and animal	Sensitizing

### Respiratory Sensitization

Name	Species	Value
EPOXY RESIN	Human	Some positive data exist, but the data are not sufficient for classification

### Germ Cell Mutagenicity

Name	Route	Value
EPOXY RESIN	In vivo	Not mutagenic
EPOXY RESIN	In Vitro	Some positive data exist, but the data are not sufficient for classification
4,4'-ISOPROPYLIDENEDIPHENOL	In vivo	Not mutagenic
4,4'-ISOPROPYLIDENEDIPHENOL	In Vitro	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
EPOXY RESIN	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	Multiple animal species	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
EPOXY RESIN	Ingestion	Not toxic to female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Ingestion	Not toxic to male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Dermal	Not toxic to development	Rabbit	NOAEL 300 mg/kg/day	during organogenesis
EPOXY RESIN	Ingestion	Not toxic to development	Rat	NOAEL 750 mg/kg/day	2 generation
4,4'-ISOPROPYLIDENEDIPHENOL	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL	Inhalation	Not toxic to male reproduction	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	Some positive female reproductive data	Multiple	NOAEL 50	

		exist, but the data are not sufficient for classification	animal species	mg/kg/day	
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 50 mg/kg/day	
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	Toxic to development	Multiple animal species	NOAEL 50 mg/kg/day	

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
4,4'-ISOPROPYLIDENEDIPHENOL	Inhalation	respiratory irritation	May cause respiratory irritation	Multiple animal species	LOAEL 0.152 mg/l	15 minutes
EPOXY RESIN	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
EPOXY RESIN	Dermal	liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,000 mg/kg/day	2 years
EPOXY RESIN	Dermal	nervous system	All data are negative	Rat	NOAEL 1,000 mg/kg/day	13 weeks
EPOXY RESIN	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   eyes   kidney and/or bladder	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
4,4'-ISOPROPYLIDENEDIPHENOL	Inhalation	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL	Inhalation	hematopoietic system	All data are negative	Rat	NOAEL 0.15 mg/l	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 50 mg/kg/day	3 generation
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 370 mg/kg/day	13 weeks
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	endocrine system   hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	3 generation
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 185 mg/kg/day	90 days
4,4'-ISOPROPYLIDENEDIPHENOL	Ingestion	heart   bone, teeth, nails, and/or hair	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 2,400 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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. 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 - No    Pressure Hazard - No    Reactivity Hazard - No    Immediate Hazard - Yes    Delayed Hazard - No

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

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
4,4'-ISOPROPYLIDENEDIPHENOL	80-05-7	10 - 30

### 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:** 1 **Flammability:** 0 **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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