

# **Safety Data Sheet**

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# **SECTION 1: Identification**

### 1.1. Product identifier

3M<sup>TM</sup> Scotch-Weld<sup>TM</sup> Structural Adhesive Film AU 200

### **Product Identification Numbers**

87-2500-0103-6, 87-2500-0104-4, 87-2500-0105-1, 87-2500-0106-9, 87-2500-0107-7, 87-2500-0120-0, 87-2500-0121-8, 87-2500-0164-8, 87-2500-0165-5, 87-2500-0166-3, 87-2500-0278-6, 87-2500-0434-5, 87-2500-0435-2, 87-3300-0037-0 7010399398, 7010351948, 7010351950, 7010399437, 7010321071, 7010399461

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

#### Recommended use

Adhesive, Structural Adhesive Film for Bonding Applications

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

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### 2.2. Label elements

#### Signal word

Not applicable.

### **Symbols**

Not applicable.

### **Pictograms**

Not applicable.

60% of the mixture consists of ingredients of unknown acute oral toxicity.

# **SECTION 3: Composition/information on ingredients**

| Ingredient                          | C.A.S. No.    | % by Wt                |
|-------------------------------------|---------------|------------------------|
| EPOXY RESIN REACTION PRODUCT        | None          | 45 - 65 Trade Secret * |
| Bisphenol A                         | 1675-54-3     | 10 - 20 Trade Secret * |
| Epoxy Resin C                       | 25068-38-6    | 5 - 20 Trade Secret *  |
| Dicyandiamide                       | 461-58-5      | < 5                    |
| 1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3- | 17526-94-2    | < 1.5                  |
| DIMETHYLUREA)                       |               |                        |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL  | 2530-83-8     | < 1                    |
| ETHER                               |               |                        |
| Adipic Dihydrazide                  | 1071-93-8     | < 1                    |
| PHENOL, 2,2',6-TRIBROMO-4,4'-       | 6386-73-8     | < 1                    |
| ISOPROPYLIDENEDI-                   |               |                        |
| Dye                                 | Trade Secret* | < 0.2                  |

<sup>\*</sup>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:

No need for first aid is anticipated. If symptoms develop, remove the affected person to fresh air. Get medical attention.

### **Skin Contact:**

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

#### Eye Contact

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, 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**

SubstanceConditionAldehydesDuring CombustionCarbon monoxideDuring Combustion

Carbon dioxideDuring CombustionHydrogen ChlorideDuring CombustionHydrogen CyanideDuring CombustionAmmoniaDuring CombustionOxides of NitrogenDuring 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

Ventilate the area with fresh air. Observe precautions from other sections.

### 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 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

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

### 8.2. Exposure controls

### 8.2.1. Engineering controls

Provide ventilated enclosure for curing. Curing enclosures must be exhausted to outdoors or to a suitable emission control device.

### 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

No protective gloves required.

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1.27 g/ml

### Respiratory protection

None required.

# **SECTION 9: Physical and chemical properties**

### 9.1. Information on basic physical and chemical properties

**Appearance** 

Physical state Solid Color Red

**Specific Physical Form:** Film Odorless

**Odor threshold** No Data Available Not Applicable рH Melting point No Data Available **Boiling Point** Not Applicable **Flash Point** No flash point **Evaporation rate** Not Applicable Not Classified Flammability (solid, gas) Flammable Limits(LEL) Not Applicable Flammable Limits(UEL) Not Applicable Not Applicable **Vapor Pressure** Vapor Density Not Applicable

Specific Gravity 1.27 [Ref Std:WATER=1]

Solubility in Water Ni

Solubility- non-waterNo Data AvailablePartition coefficient: n-octanol/ waterNot ApplicableAutoignition temperatureNot ApplicableDecomposition temperatureNo Data AvailableViscosityNot ApplicableMolecular weightNo Data Available

Percent volatile Negligible

# **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

Density

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

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:

No known health effects.

#### **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.

### **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   | Species | No data available; calculated ATE >5,000 mg/kg |
| Bisphenol A                              | Dermal      | Rat     | LD50 > 1,600 mg/kg                             |
| Bisphenol A                              | Ingestion   | Rat     | LD50 > 1,000 mg/kg                             |
| Epoxy Resin C                            | Dermal      | Rat     | LD50 > 1,600 mg/kg                             |
| Epoxy Resin C                            | Ingestion   | Rat     | LD50 > 1,000 mg/kg                             |
| Dicyandiamide                            | Dermal      | Rabbit  | LD50 > 10,000 mg/kg                            |
| Dicyandiamide                            | Ingestion   | Rat     | LD50 > 30,000 mg/kg                            |
| 1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-      | Dermal      | Rat     | LD50 > 2,000 mg/kg                             |
| DIMETHYLUREA)                            |             |         |  |
| 1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-      | Ingestion   | Rat     | LD50 > 2,000 mg/kg                             |
| DIMETHYLUREA)                            |             |         |  |
| Adipic Dihydrazide                       | Ingestion   | Mouse   | LD50 > 5,000 mg/kg                             |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER | Dermal      | Rabbit  | LD50 4,000 mg/kg                               |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER | Inhalation- | Rat     | LC50 > 5.3  mg/l                               |
|  | Dust/Mist   |         |  |
|  | (4 hours)   |         |  |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER | Ingestion   | Rat     | LD50 7,010 mg/kg                               |

ATE = acute toxicity estimate

## Skin Corrosion/Irritation

| Skiii Corrosion/irritation |            |                           |
|----------------------------|------------|---------------------------|
| Name                       | Species    | Value                     |
| Overall product            | Multiple   | No significant irritation |
| Overall product            | iviuitipie | 100 Significant inflation |

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|  | animal  |                           |
|--|---------|---------------------------|
|  | species |                           |
| Bisphenol A                                      | Rabbit  | Mild irritant             |
| Epoxy Resin C                                    | Rabbit  | Mild irritant             |
| Dicyandiamide                                    | Human   | Minimal irritation        |
|  | and     |                           |
|  | animal  |                           |
| 1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA) | Rabbit  | No significant irritation |
| Adipic Dihydrazide                               | Rabbit  | No significant irritation |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER         | Rabbit  | Mild irritant             |

Serious Eye Damage/Irritation

| Name   | Species   | Value                     |
|--|-----------|---------------------------|
|  |           |                           |
| Bisphenol A                                      | Rabbit    | Moderate irritant         |
| Epoxy Resin C                                    | Rabbit    | Moderate irritant         |
| Dicyandiamide                                    | Professio | Mild irritant             |
|  | nal       |                           |
|  | judgeme   |                           |
|  | nt        |                           |
| 1,1'-(4-METHYL-M-PHENYLENE)BIS(3,3-DIMETHYLUREA) | Rabbit    | No significant irritation |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER         | Rabbit    | Corrosive                 |

### **Skin Sensitization**

| Name                                     | Species | Value          |
|--|---------|----------------|
| Overall product                          | Guinea  | Not classified |
|  | pig     |                |
| Bisphenol A                              | Human   | Sensitizing    |
|  | and     |                |
|  | animal  |                |
| Epoxy Resin C                            | Human   | Sensitizing    |
|  | and     |                |
|  | animal  |                |
| Dicyandiamide                            | Guinea  | Not classified |
|  | pig     |                |
| Adipic Dihydrazide                       | Guinea  | Sensitizing    |
|  | pig     |                |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER | Guinea  | Not classified |
|  | pig     |                |

**Respiratory Sensitization** 

| ====================================== |         |                |
|--|---------|----------------|
| Name                                   | Species | Value          |
| Bisphenol A                            | Human   | Not classified |
| Epoxy Resin C                          | Human   | Not classified |

**Germ Cell Mutagenicity** 

| Name                                     | Route    | Value  |
|--|----------|--|
|  |          |  |
| Bisphenol A                              | In vivo  | Not mutagenic  |
| Bisphenol A                              | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Epoxy Resin C                            | In vivo  | Not mutagenic  |
| Epoxy Resin C                            | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Dicyandiamide                            | In Vitro | Not mutagenic  |
| Adipic Dihydrazide                       | In vivo  | Not mutagenic  |
| 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 |
|------|-------|---------|-------|
|      |       |         |       |

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| Bisphenol A                              | Dermal    | Mouse | Some positive data exist, but the data are not sufficient for classification |
|--|-----------|-------|--|
| Epoxy Resin C                            | Dermal    | Mouse | Some positive data exist, but the data are not sufficient for classification |
| Dicyandiamide                            | Ingestion | Rat   | Not carcinogenic   |
| 3-(TRIMETHOXYSILYL)PROPYL GLYCIDYL ETHER | Dermal    | Mouse | Not carcinogenic   |

# Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name  | Route     | Value                                  | Species | Test Result              | Exposure<br>Duration         |
|---|-----------|--|---------|--------------------------|------------------------------|
| Bisphenol A                                 | Ingestion | Not classified for female reproduction | Rat     | NOAEL 750<br>mg/kg/day   | 2 generation                 |
| Bisphenol A                                 | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 750<br>mg/kg/day   | 2 generation                 |
| Bisphenol A                                 | Dermal    | Not classified for development         | Rabbit  | NOAEL 300<br>mg/kg/day   | during<br>organogenesi<br>s  |
| Bisphenol A                                 | Ingestion | Not classified for development         | Rat     | NOAEL 750<br>mg/kg/day   | 2 generation                 |
| Epoxy Resin C                               | Ingestion | Not classified for female reproduction | Rat     | NOAEL 750<br>mg/kg/day   | 2 generation                 |
| Epoxy Resin C                               | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 750<br>mg/kg/day   | 2 generation                 |
| Epoxy Resin C                               | Dermal    | Not classified for development         | Rabbit  | NOAEL 300<br>mg/kg/day   | during<br>organogenesi<br>s  |
| Epoxy Resin C                               | Ingestion | Not classified for development         | Rat     | NOAEL 750<br>mg/kg/day   | 2 generation                 |
| Dicyandiamide                               | Ingestion | Not classified for female reproduction | Rat     | NOAEL 1,000<br>mg/kg/day | premating & during gestation |
| Dicyandiamide                               | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 1,000<br>mg/kg/day | 44 days                      |
| Dicyandiamide                               | Ingestion | Not classified for development         | Rat     | NOAEL 1,000<br>mg/kg/day | premating & during gestation |
| 3-(TRIMETHOXYSILYL)PROPYL<br>GLYCIDYL ETHER | Ingestion | Not classified for female reproduction | Rat     | NOAEL 1,000<br>mg/kg/day | 1 generation                 |
| 3-(TRIMETHOXYSILYL)PROPYL<br>GLYCIDYL ETHER | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 1,000<br>mg/kg/day | 1 generation                 |
| 3-(TRIMETHOXYSILYL)PROPYL<br>GLYCIDYL ETHER | Ingestion | Not classified for development         | Rat     | NOAEL 3,000<br>mg/kg/day | during<br>organogenesi<br>s  |

# Target Organ(s)

# **Specific Target Organ Toxicity - single exposure**

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

Specific Target Organ Toxicity - repeated exposure

| Name        | Route     | Target Organ(s)  | Value          | Species | Test Result                 | Exposure<br>Duration |
|-------------|-----------|--|----------------|---------|-----------------------------|----------------------|
| Bisphenol A | Dermal    | liver  | Not classified | Rat     | NOAEL<br>1,000<br>mg/kg/day | 2 years              |
| Bisphenol A | Dermal    | nervous system   | Not classified | Rat     | NOAEL<br>1,000<br>mg/kg/day | 13 weeks             |
| Bisphenol A | Ingestion | auditory system  <br>heart   endocrine<br>system  <br>hematopoietic<br>system   liver   eyes | Not classified | Rat     | NOAEL<br>1,000<br>mg/kg/day | 28 days              |

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|   |           | kidney and/or<br>bladder   |                |     |                             |          |
|---|-----------|--|----------------|-----|-----------------------------|----------|
| Epoxy Resin C                                       | Dermal    | liver  | Not classified | Rat | NOAEL<br>1,000<br>mg/kg/day | 2 years  |
| Epoxy Resin C                                       | Dermal    | nervous system   | Not classified | Rat | NOAEL<br>1,000<br>mg/kg/day | 13 weeks |
| Epoxy Resin C                                       | Ingestion | auditory system  <br>heart   endocrine<br>system  <br>hematopoietic<br>system   liver   eyes  <br>kidney and/or<br>bladder   | Not classified | Rat | NOAEL<br>1,000<br>mg/kg/day | 28 days  |
| Dicyandiamide                                       | Ingestion | kidney and/or<br>bladder   | Not classified | Rat | NOAEL<br>6,822<br>mg/kg/day | 13 weeks |
| 3-<br>(TRIMETHOXYSILYL)P<br>ROPYL GLYCIDYL<br>ETHER | Ingestion | heart   endocrine<br>system   bone, teeth,<br>nails, and/or hair  <br>hematopoietic<br>system   liver  <br>immune system  <br>nervous system  <br>kidney and/or<br>bladder   respiratory<br>system | Not classified | Rat | NOAEL<br>1,000<br>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.

# **SECTION 14: Transport Information**

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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

Not applicable

## 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

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: 0 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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