

MATERIAL SAFETY 3M
DATA SHEET 3M Center
 St. Paul, Minnesota
 55144-1000
 1-800-364-3577 or (651) 737-6501 (24 hours)

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DIVISION: TELECOM SYSTEMS DIVISION
TRADE NAME:

8692 Epoxy for Fiber Optic Connectors - Parts A & B
ID NUMBER/U.P.C. :
80-6103-1834-9 00-54007-17779-1 80-6103-1835-6 00-54007-17780-7
80-6104-4309-7 00-54007-48988-7 80-6104-5313-8 00-54007-48957-3
80-6104-5314-6 00-54007-48958-0 80-6106-1638-7 00-54007-57494-1
80-6106-1639-5 00-54007-57495-8 80-6107-6503-6 00-54007-91966-7
80-6107-6504-4 00-54007-91965-0 80-6107-7148-9 00-54007-91647-5
80-6107-7202-4 00-54007-91706-9 80-6111-5740-7 - - -
80-6111-5741-5 - - -

ISSUED: July 01, 1999
SUPERSEDES: June 10, 1999
DOCUMENT: 06-0129-4

This product is a kit or a multipart product which consists of multiple,
independently packaged components. An MSDS for each of these components is
included. Please do not separate the component MSDSs from this cover page.
The document numbers of the MSDSs for components of this product are:
06-0127-8
06-0128-6

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

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DIVISION: TELECOM SYSTEMS DIVISION
 TRADE NAME:

8692 Epoxy for Fiber Optic Connectors - Part A (Resin)
 ISSUED: December 17, 1999
 SUPERSEDES: February 27, 1997
 DOCUMENT: 06-0127-8

1. INGREDIENT	C.A.S. NO.		PERCENT
Bisphenol A-Epichlorohydrin Copolymer...	25068-38-6	40	- 70
Phenol-formaldehyde polymer glycidyl ether.....	28064-14-4	30	- 50
P-tert-butylphenyl glycidyl ether.....	3101-60-8	1	- 5
3-(trimethoxysilyl)propyl glycidyl ether.....	2530-83-8		< 1

The components of this product are in compliance with the chemical
 notification requirements of TSCA.

2. PHYSICAL DATA

BOILING POINT:..... > 350 F
 VAPOR PRESSURE:..... < 1 mmHg
 VAPOR DENSITY:..... > 1 Air=1
 EVAPORATION RATE:..... N/D
 SOLUBILITY IN WATER:..... N/D
 SPECIFIC GRAVITY:..... 1.18 Water=1
 PERCENT VOLATILE:..... N/D
 pH:..... N/D
 VISCOSITY:..... N/D
 MELTING POINT:..... N/D

APPEARANCE AND ODOR:
 Straw-colored liquid, mild odor.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... > 405 F TOC
FLAMMABLE LIMITS - LEL:..... N/D
FLAMMABLE LIMITS - UEL:..... N/D
AUTOIGNITION TEMPERATURE:..... N/D

EXTINGUISHING MEDIA:

Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:

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.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

See Hazardous Decomposition section for products of combustion.

NFPA HAZARD CODES: HEALTH: 1 FIRE: 1 REACTIVITY: 0
UNUSUAL REACTION HAZARD: none

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:

Strong Acids, Strong Bases, Strong Oxidizing Agents.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:

The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances, and appropriate precautions should be taken.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Observe precautions from other sections. Ventilate area. Contain spill. Cover with absorbent material. Collect spilled material. Clean up residue with an appropriate solvent such as Methyl Ethyl Ketone. Extinguish all ignition sources and ventilate area. Follow the MSDS recommendations for the cleanup solvent. Place in a closed container.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

5. ENVIRONMENTAL INFORMATION (continued)

RECOMMENDED DISPOSAL:

Cure product according to product instructions. Do not release to waterways or sewer. Incinerate uncured waste in an industrial or commercial incinerator. Dispose of completely cured (or polymerized) material in a sanitary landfill.

ENVIRONMENTAL DATA:

Not determined.

REGULATORY INFORMATION:

Volatile Organic Compounds: N/D.
VOC Less H2O & Exempt Solvents: N/D.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

EPCRA HAZARD CLASS:

FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:

Immediately wash skin with soap and large amounts of water. Remove contaminated clothing. If signs/symptoms occur, call a physician. Wash contaminated clothing before reuse and dispose of contaminated shoes.

INHALATION:

Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

IF SWALLOWED:

Do not induce vomiting. Drink two glasses of water. Call a physician.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact. Wear unvented goggles during operations in which exposure is likely.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: nitrile rubber.

RECOMMENDED VENTILATION:

Use in a well-ventilated area. Provide sufficient ventilation to maintain emissions below recommended exposure limits.

RESPIRATORY PROTECTION:

Avoid prolonged breathing of vapors.

PREVENTION OF ACCIDENTAL INGESTION:

Wash hands after handling and before eating.

RECOMMENDED STORAGE:

Store away from heat.

FIRE AND EXPLOSION AVOIDANCE:

Keep container tightly closed.

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
Bisphenol A-Epichlorohydrin Copolymer.....	NONE	NONE	NONE	NONE	
Phenol-formaldehyde polymer glycidyl ether.....	NONE	NONE	NONE	NONE	
P-tert-butylphenyl glycidyl ether....	NONE	NONE	NONE	NONE	
3-(trimethoxysilyl)propyl glycidyl ether.....	5	PPM	TWA	CMRG	

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- CMRG: Chemical Manufacturer Recommended Exposure Guidelines
- NONE: None Established

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

8. HEALTH HAZARD DATA

EYE CONTACT:

Mild Eye Irritation: signs/symptoms can include redness, swelling, pain, and tearing.

SKIN CONTACT:

Allergic Skin Reaction: signs/symptoms can include redness, swelling, blistering, and itching.

Mild Skin Irritation: signs/symptoms can include redness, swelling, and itching.

May be absorbed through the skin and produce effects similiar to those caused by inhalation and/or ingestion.

INHALATION:

Nervous System Effects: signs/symptoms can include emotional changes, lack of coordination, tremors and sensory loss.

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Pulmonary Edema: signs/symptoms can include coughing, congestion, difficulty breathing, which can result in respiratory failure and death.

IF SWALLOWED:

Gastrointestinal Effects: signs/symptoms generally will include abdominal pain.

Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

CANCER:

WARNING: Contains a chemical which can cause cancer. (BISPHENOL A EPOXY RESINS) (Ciba-Geigy)

SECTION CHANGE DATES

INGREDIENTS SECTION CHANGED SINCE February 27, 1997 ISSUE

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DIVISION: TELECOM SYSTEMS DIVISION
 TRADE NAME:
 8692 Epoxy for Fiber Optic Connectors - Part B (Hardener)
 ISSUED: December 17, 1999
 SUPERSEDES: February 27, 1997
 DOCUMENT: 06-0128-6

1. INGREDIENT	C.A.S. NO.		PERCENT
Epoxy Resin/Amine Adduct.....	68610-56-0	40	- 70
Bis(3-aminopropyl) ether of diethylene glycol.....	4246-51-9	10	- 35
Diethylenetriamine.....	111-40-0	5	- 25
Epoxy Resin/Amine Adduct.....	68585-28-4	1	- 10
Aniline Dye.....	68389-46-8		< 1.0

The components of this product are in compliance with the chemical
 notification requirements of TSCA.

Note: Reacted mixture of listed ingredients

2. PHYSICAL DATA

BOILING POINT:..... > 300 F
 VAPOR PRESSURE:..... < 1 mmHg
 VAPOR DENSITY:..... > 2 Air=1
 EVAPORATION RATE:..... N/D
 SOLUBILITY IN WATER:..... N/D
 SPECIFIC GRAVITY:..... 1.04 Water=1
 PERCENT VOLATILE:..... N/D
 pH:..... N/D
 VISCOSITY:..... N/D
 MELTING POINT:..... N/D

APPEARANCE AND ODOR:
 Blue liquid, ammoniacal odor.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:..... > 200 F Setaflash
FLAMMABLE LIMITS - LEL:..... N/D
FLAMMABLE LIMITS - UEL:..... N/D
AUTOIGNITION TEMPERATURE:..... N/D

EXTINGUISHING MEDIA:
Carbon dioxide, Dry chemical, Foam

SPECIAL FIRE FIGHTING PROCEDURES:
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.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
See Hazardous Decomposition section for products of combustion.

NFPA HAZARD CODES: HEALTH: 3 FIRE: 1 REACTIVITY: 0
UNUSUAL REACTION HAZARD: none

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS/CONDITIONS TO AVOID:
Strong Acids, Strong Bases, Strong Oxidizing Agents.

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

HAZARDOUS DECOMPOSITION PRODUCTS:
The by-products expected in incomplete pyrolysis or combustion of epoxy resins are mainly phenolics, carbon monoxide and water. The thermal decomposition products of epoxy resins therefore should be treated as potentially hazardous substances, and appropriate precautions should be taken.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:
Observe precautions from other sections. Ventilate area. Contain spill. Cover with absorbent material. Collect spilled material. Clean up residue with an appropriate solvent such as Methyl Ethyl Ketone. Extinguish all ignition sources and ventilate area. Follow the MSDS recommendations for the cleanup solvent. Place in a closed container.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

5. ENVIRONMENTAL INFORMATION (continued)

RECOMMENDED DISPOSAL:

Cure product according to product instructions. Do not release to waterways or sewer. Incinerate uncured waste in an industrial or commercial incinerator. Dispose of completely cured (or polymerized) material in a sanitary landfill.

ENVIRONMENTAL DATA:

Not determined.

REGULATORY INFORMATION:

Volatile Organic Compounds: N/D.
VOC Less H2O & Exempt Solvents: N/D.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

EPCRA HAZARD CLASS:

FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

6. SUGGESTED FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT:

Immediately wash skin with soap and large amounts of water. Remove contaminated clothing. If signs/symptoms occur, call a physician. Wash contaminated clothing before reuse and dispose of contaminated shoes.

INHALATION:

Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

IF SWALLOWED:

If swallowed, do NOT induce vomiting. Give victim two glasses of water. Call a physician immediately. Never give anything by mouth to an unconscious person.

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:

Avoid eye contact. Wear unvented goggles during operations in which exposure is likely.

SKIN PROTECTION:

Avoid skin contact. Wear appropriate gloves when handling this material. A pair of gloves made from the following material(s) are recommended: nitrile rubber.

RECOMMENDED VENTILATION:

Use in a well-ventilated area. Provide sufficient ventilation to maintain emissions below recommended exposure limits.

RESPIRATORY PROTECTION:

Avoid breathing of vapors.

PREVENTION OF ACCIDENTAL INGESTION:

Wash hands after handling and before eating.

RECOMMENDED STORAGE:

Store away from heat. Keep container closed when not in use.

FIRE AND EXPLOSION AVOIDANCE:

Keep container tightly closed.

EXPOSURE LIMITS

INGREDIENT	VALUE	UNIT	TYPE	AUTH	SKIN*
Epoxy Resin/Amine Adduct.....	NONE	NONE	NONE	NONE	
Bis(3-aminopropyl) ether of diethylene glycol.....	NONE	NONE	NONE	NONE	
Diethylenetriamine.....	1	PPM	TWA	ACGIH	Y
Diethylenetriamine.....	1	PPM	TWA	OSHA	Y
Epoxy Resin/Amine Adduct.....	NONE	NONE	NONE	NONE	
Aniline Dye.....	NONE	NONE	NONE	NONE	

* SKIN NOTATION: Listed substances indicated with 'Y' under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NONE: None Established

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

8. HEALTH HAZARD DATA

EYE CONTACT:

Chemical Related Eye Burns (chemical corrosivity): signs/symptoms can include cloudy appearance of the cornea, chemical burns, pain, tearing, ulcers, impaired vision or loss of vision.

Severe Eye Irritation: signs/symptoms can include redness, swelling, pain, tearing, cloudy appearance of the cornea, impaired vision and possible permanently impaired vision.

SKIN CONTACT:

Allergic Skin Reaction: signs/symptoms can include redness, swelling, blistering, and itching.

Severe Skin Irritation: signs/symptoms can include redness, swelling, itching, dryness, cracking, blistering, and pain.

May be absorbed through the skin and produce effects similar to those caused by inhalation and/or ingestion.

WHILE THE FOLLOWING EFFECTS ARE ASSOCIATED WITH ONE OR MORE OF THE INDIVIDUAL INGREDIENTS IN THIS PRODUCT AND ARE REQUIRED TO BE INCLUDED ON THE MSDS BY THE U.S. OSHA HAZARD COMMUNICATION STANDARD, THEY ARE NOT EXPECTED EFFECTS DURING FORESEEABLE USE OF THIS PRODUCT.

Skin Burns (chemical corrosivity): signs/symptoms can include redness, swelling, itching, pain, blistering, ulceration, sloughing, and scar formation.

INHALATION:

Allergic Respiratory Reaction: signs/symptoms can include difficulty breathing, wheezing, tightness of chest, and respiratory failure.

Nervous System Effects: signs/symptoms can include emotional changes, lack of coordination, tremors and sensory loss.

Irritation (upper respiratory): signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

Pulmonary Edema: signs/symptoms can include coughing, congestion, difficulty breathing, which can result in respiratory failure and death.

IF SWALLOWED:

Gastrointestinal Effects: signs/symptoms generally will include abdominal pain.

Esophageal Burns: signs/symptoms can include pain in throat, difficult swallowing and blood in sputum.

Irritation of Gastrointestinal Tissues: signs/symptoms can include

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

8. HEALTH HAZARD DATA (continued)

pain, vomiting, abdominal tenderness, nausea, blood in vomitus, and blood in feces.

Burns of the Oral Tissues: signs/symptoms can include pain, burns of tongue and inside of mouth, redness and tissue loss.

CANCER:

WARNING: Contains a chemical which can cause cancer. (BISPHENOL A EPOXY RESINS) (Ciba-Geigy)

SECTION CHANGE DATES

INGREDIENTS SECTION CHANGED SINCE February 27, 1997 ISSUE

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