Dynatex

MATERIAL SAFETY DATA SHEET

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4-MINUTE EPOXY
PART NO. 49409 - PART A - RESIN

SECTION I - IDENTIFICATION AND USE

Product Name : 4-Minute Epoxy Syringe (Resin)
Chemical Name/Family : Epoxy Resin
General Use : This information applies to the resin component of the two-part kit; handle freshly mixed resin and hardener as recommended for the hardener. After curing, the product is not hazardous.

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT	CAS NO.	EXPOSURE LIMITS	WGT %
Bisphenol A diglycidyl ether resin	25085-99-8	N/E	60-100

SECTION III - PHYSICAL DATA

Specific gravity : 1.19
Melting point (^{0}) : n/d
Vapor pressure (mmHg) : 0.03 mm Hg @ 171^{0}F
VOC (grams/liter) : 0
Percent volatile by volume : 0
Percent solids by weight : 100
Boiling Point (^{0}F) : >500
Vapor density (air=1) : >1
Evaporation rate (butyl acetate=1) : <1
pH (5% solution or slurry in water) : neutral
Appearance, form, odor : Viscous, amber liquid with Mercaptan odor

SECTION IV - FIRE AND EXPLOSION DATA

Extinguishing media : Carbon dioxide, dry chemical, foam
Flash point (^{0}F) (method used) : >400 (PMCC)
Explosive limits in air (percent) : Lower – n/d Upper – n/d
Special firefighting procedures : Material will not burn unless preheated. Do Not enter confined space without full bunker gear. Firefighters should wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers with water.

Unusual Fire and explosion hazards	: Heating above 300^0F in the presence of air may cause slow oxidative decomposition and above 500^0F may cause polymerization.
Hazardous products of combustion	: When heated to decomposition it emits fumes of carbon monoxide, other fumes and vapors varying in composition and toxicity.

SECTION V - REACTIVITY DATA

Stability	: This material is chemically stable. Hazardous polymerization will not occur.
Conditions to avoid	: Open flame and extreme heat.
Incompatible materials	: Strong Lewis or mineral acids, strong oxidizing agents, strong mineral and organic bases (especially primary and secondary aliphatic amines)
Hazardous products of decomposition	: Oxides of carbon, aldehydes, acids and other organic substances may be formed during combustion or elevated temperature (>500^0F) degradation.
Conditions under which hazardous polymerization may occur	: Heat is generated when resin is mixed with curing agents; Run-a-way cure reactions may char and decompose the resin, generating unidentified fumes and vapors, which may be toxic.

SECTION VI – HEALTH HAZARD DATA

CAUTION! Eye and skin irritant. Potential skin sensitizer. Avoid contact with eyes. Avoid prolonged or repeated skin contact. Do Not take internally. Wash thoroughly after handling.

POTENTIAL HEALTH EFFECTS:

Primary routes of exposure	: Skin contact, eye contact.

SYMPTOMS OF ACUTE OVEREXPOSURE:

Skin	: Moderate irritant. Contact at elevated temperatures can cause thermal burns. May cause skin sensitization (rashes, hives).
Eyes	: Moderate irritant. Contact at elevated temperatures can cause thermal burns.
Inhalation	: The low vapor pressure of the resin makes inhalation unlikely in normal use.
Ingestion	: Acute oral toxicity is low. May cause gastric distress.
Effects of chronic overexposure	: Prolonged or repeated skin contact may cause sensitization with itching, swelling or rashes on later exposure.

CARCINOGENICITY:

OSHA regulated	: No
ACGIH	: No

National Toxicology Program	: No
International Agency for Research on Cancer	: No
Cancer suspect constituent(s)	: None
Medical conditions, which may be aggravated by exposure	: Preexisting eye and skin disorders. Development of preexisting skin or lung allergy symptoms may increase.

SECTION VII – FIRST AID MEASURES

First aid for eyes	: Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.
First aid for skin	: Immediately remove contaminated clothing and excess contaminant. Flush skin with water. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.
First aid for inhalation	: Remove patient to fresh air. Administer oxygen if breathing is difficult. Consult a physician if symptoms persist.
First Aid for ingestion	: Do Not induce vomiting. Give two glasses of water to dilute if patient is conscious. Get medical attention.

NOTE TO PHYSICIAN! In general, emesis induction is unnecessary in high viscosity, low volatility products, e.g., neat epoxy resins.

SECTION VIII – ACCIDENTAL RELEASE MEASURES

Spill control	: Avoid personal contact. Eliminate ignition sources. Ventilate area.
Containment	: Dike, contain and absorb with clay, sand or other suitable material.
Cleanup	: For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water to remove trace residue.
Special procedures	: Prevent spill from entering drainage/sewer systems, waterways and surface waters.

SECTION IX – HANDLING AND STORAGE

Handling Precautions	: Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking, applying cosmetics or using toilet facilities. Launder contaminated clothing and protective gear before reuse. Discard contaminated leather

articles. Handle mixed resin and hardener in accordance with the potential hazard of the curing agent used. Provide appropriate ventilation /respiratory protection against decomposition products during welding/flame cutting operations and to protect against nuisance dust during sanding/grinding of cured product.

Storage : Store in a cool, dry area away from high temperatures and flames.

SECTION X – EXPOSURE CONTROLS

ENGINEERING CONTROLS:

Ventilation : Local exhaust ventilation is preferred although good general mechanical ventilation is usually adequate for most industrial applications. Local exhaust is recommended for confined areas.

Other engineering controls : Have emergency shower and eyewash available.

PERSONAL PROTECTIVE EQUIPMENT:

Eye and face protection : Safety glasses with side shields.

Skin Protection : Chemical-resistant gloves and other gear as required to prevent skin contact.

Respiratory protection : None required at normal handling temperatures and conditions. Use NIOSH approved organic vapor cartridges for uncured resin and dust/particle respirators during grinding/sanding operations of cured resin as exposure levels dictate.

SECTION XI – REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TSCA : All ingredients of this product are listed, or are exempt from listing, on the TSCA inventory. Export notification is required under TSCA Sec. 12B – see below.

The following RCRA code(s) applies to this material if it becomes waste : None

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs.)	TSCA 12B Export Notification
Bisphenol A diglycidyl ether resin	No	No	0.0	Required

*****Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance.

******Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

FOR PURPOSES OF SARA SECTION 312 HAZARDOUS MATERIALS INVENTORY REPORTING, THE FOLLOWING HAZARD CLASSES APPLY TO THIS MATERIAL:

~Immediate health hazard – delayed health hazard~

CANADIAN REGULATIONS:

WHMIS hazard class(es) : D2B

~All components of this product are on the Domestic Substances List~

SECTION XII – HAZARD COMMUNICATION CODES

HMIS Ratings:

Health	:	2
Flammability	:	1
Reactivity	:	1

4-MINUTE EPOXY
PART NO. 49409 – PART B – HARDENER

SECTION I - IDENTIFICATION AND USE

Product Name : 4-Minute Epoxy Syringe (Hardener)
Chemical Name/Family : Polymercaptan/polyamine mixture
General Use : The following information applies to the hardener component of the two-part kit and to freshly mixed resin and hardener. After curing, this product is not hazardous.

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	CAS #	EXPOSURE LIMITS	WGT %
2,4,6,-Tri(Dimethylaminomethyl) phenol	90-72-2	n/e	10-20
Mercaptan amine blend		n/e	80-90

SECTION III - PHYSICAL DATA

Specific gravity : 1.13
Melting point (^{0}F) : n/d
Vapor pressure (mmHg) : <1 @70^{0}F
VOC (grams/liter) : 0
Percent volatile by volume : 0
Percent solids by weight : 100
Boiling point (^{0}F) : n/d
Vapor density (air=1) : n/d
Evaporation rate (butyl acetate=1) : n/d
Solubility in water : Negligible
pH (5% solution or slurry in water) : 9.5

SECTION IV - FIRE AND EXPLOSION DATA

Extinguishing media : Water, carbon dioxide, dry chemical, foam.
Flash point (^{0}F) (method used) : >200 (PMCC)
Explosive limits in air (percent) : Lower – n/d Upper – n/d
Special Fire Fighting procedures : Fire fighters should wear self-contained breathing apparatus and protective clothing in confined areas. Cool containers with water spray.
Unusual fire and explosion hazards : Toxic smoke and vapors may form during combustion.
Hazardous products of combustion : Oxides of carbon, oxides of sulfur, oxides of nitrogen.

SECTION V - REACTIVITY DATA

Stability : This material is chemically stable. Hazardous polymerization will not occur.

Conditions to avoid : Open flame and extreme heat.

SECTION VI – HEALTH HAZARD DATA

WARNING*! Severe eye, skin and respiratory tract irritant (evidenced by itching, redness, burning sensation). Potential skin sensitizer. Overexposure may cause delayed lung effects. Avoid breathing vapors. Use with adequate ventilation. DO NOT take internally. Wash thoroughly after handling.*

POTENTIAL HEALTH EFFECTS:

Primary routes of exposure	: Skin contact, eye contact, inhalation.

SYMPTOMS OF ACUTE OVEREXPOSURE:

Skin	: Can cause severe irritation, especially on prolonged contact. Potential sensitizer.
Eyes	: Causes severe irritation with possible permanent damage and even blindness.
Inhalation	: Considered slightly toxic. Can cause irritation of respiratory tract. Over exposure to fumes or vapors may cause delayed lung injury and chemical pneumonia.
Ingestion	: Slightly toxic. May cause fatigue, muscle weakness, gastrointestinal irritation, nausea, vomiting and diarrhea.
Effects of chronic overexposure	: Prolonged or severe overexposure to DMP vapor can cause delayed lung damage and chemical pneumonia. Prolonged or repeated contact with this material may cause skin sensitization.

CARCINOGENICITY:

OSHA regulated	: No
ACGIH	: No
National Toxicology Program	: No
International Agency for Research on Cancer	: No
Cancer-suspect constituent(s)	: None
Medical conditions, which may be aggravated by exposure	: May aggravate existing skin, eye and lung conditions.

SECTION VII – FIRST AID MEASURES

First aid for eyes	: Flush eye with clean water for at least 15 minutes while gently holding eyelids open. Get immediate medical attention.
First aid for skin	: Remove contaminated clothing and shoes. Wash thoroughly with soap and warm water. Consult a physician if irritation develops.
First aid for inhalation	: Remove patient to fresh air. Provide oxygen if breathing is difficult. Consult a physician if symptoms persist.
First aid for ingestion	: DO NOT induce vomiting. Give large amounts of water followed by milk if available.

Consult a physician.

SECTION VIII – ACCIDENTAL RELEASE MEASURES

Spill control	: Avoid personal contact. Eliminate ignition sources. Ventilate area.
Containment	: Dike, contain and absorb with clay, sand or other suitable material.
Cleanup	: For large spills, pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water to remove trace residue.
Special procedures	: Prevent spill from entering drainage/sewer systems, waterways and surface waters.

SECTION IX – HANDLING AND STORAGE

Handling Precautions	: Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after using and particularly before eating, drinking, smoking applying cosmetics or using toilet facilities. Launder contaminated clothing and protective gear before reuse. Discard contaminated leather articles. Handle mixed resin and hardener in accordance with the potential hazard of the curing agent used. Provide appropriate ventilation /respiratory protection against decomposition products during welding/flame cutting operations and to protect against nuisance dust during sanding/grinding of cured product.
Storage	: Store in a cool, dry area away from high temperatures and flames.

SECTION X – EXPOSURE CONTROLS

ENGINEERING CONTROLS:

Ventilation	: General mechanical ventilation is adequate for occasional use. For prolonged or repeated use, local exhaust is recommended.
Other engineering controls	: Have emergency shower and eyewash stations available.

PERSONAL PROTECTIVE EQUIPMENT:

Eye and face protection	: Safety glasses with sideshields or chemical goggles.
Skin protection	: Chemical-resistant rubber (for example, neoprene, butyl rubber or nitrile) gloves and other protective gear as needed to prevent skin contact
Respiratory protection	: None needed in normal use with proper ventilation. In poorly ventilated areas or when creating a dust or mist, use NIOSH-approved organic

vapor respirator.

SECTION XI – REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TSCA : All ingredients of this product are listed, or are exempt from listing on the TSCA inventory.

The following RCRA code(s) applies to this material if it becomes waste : None

Regulatory status of hazardous chemical constituents of this product:

Constituent	Extremely Hazardous*	Toxic Chemical**	CERCLA RQ (lbs.)	TSCA 12B Export Notification
2,4,6 Tri(dimethylamlnomethyl) phenol	No	No	0.0	Not Required
Mercaptan amine blend	No	No	0.0	Not Required

*****Consult the appropriate regulations for emergency planning and release reporting requirements for substances on the SARA Section 301 Extremely Hazardous Substance.

******Substances for which the "Toxic Chemical" column is marked "Yes" are on the SARA Section 313 list of Toxic Chemicals, for which release reporting may be required. For specific requirements, consult the appropriate regulations.

For purposes of SARA Section 312 hazardous materials inventory reporting, the following hazard classes apply to this material: ~Immediate health hazard – Delayed health hazard~

CANADIAN REGULATIONS:

WHMIS hazard class(es) : D2B

All components of this product are on the Domestic Substances List.

SECTION XII – HAZARD COMMUNICATION CODES

HMIS RATINGS:

Health : 3
Flammability : 1
Reactivity : 1