EPO-TEK® MED-320 PMF SYRINGE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 3/10/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : EPO-TEK® MED-320 PMF SYRINGE

1.2. Recommended use and restrictions on use

Recommended use : Adhesives
Restrictions on use : Not to be used for any purpose other than the one the product was designed for

1.3. Supplier

Epoxy Technology, Inc.
14 Fortune Drive
Billerica, MA 01821
USA
T 978-667-3805 - F 978-663-9782
www.epotek.com

1.4. Emergency telephone number

Emergency number : VelocityEHS: +1 (800) 255-3924, +1 (813) 248-0585

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation Category 1A	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Hazardous to the aquatic environment – Chronic Hazard Category 2	H411	Toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H411 - Toxic to aquatic life with long lasting effects
Precautionary statements (GHS US) : P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
P302+P352 - If on skin: Wash with plenty of water.

P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center or doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Harmful dust may be released during cutting, milling or grinding process.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Bisphenol A diglycidyl ether resin	CAS-No.: 25085-99-8	30 – 60	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Reactive diluent*	CAS-No.: Trade Secret	10 – 30	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Trimethyl-1, 6-Hexanediamine	CAS-No.: 25513-64-8	10 – 30	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Carbon black	CAS-No.: 1333-86-4	10 – 30	Self-heat. 1, H251 Carc. 2, H351

*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

Comments : Components not listed are either non-hazardous or are below reportable limits.
This product contains Carbon Black, which is suspected of causing cancer when inhaled in fine particulate form. Carbon Black should not be respirable in this formulation.
However, if cured material will be ground, milled, etc, wear respiratory protection to avoid inhaling any dust that may be produced.

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. Call a physician immediately.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear suitable gloves resistant to chemical penetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's information. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Black
Odor	:	Mild odor
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Trimethyl-1, 6-Hexanediamine (25513-64-8)	
LD50 oral rat	910 mg/kg body weight Animal: rat, Animal sex: male
ATE US (oral)	910 mg/kg body weight

Bisphenol A diglycidyl ether resin (25085-99-8)	
LD50 oral rat	> 2000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Literature study, Dermal)

Reactive diluent	
ATE US (oral)	1120 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h

Carbon black (1333-86-4)	
LD50 oral rat	> 8000 mg/kg Source: ECHA
LD50 dermal rabbit	> 8000 mg/kg Source: ECHA
ATE US (oral)	8000 mg/kg body weight

Skin corrosion/irritation : Causes severe skin burns.
Serious eye damage/irritation : Causes serious eye damage.
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified.

Carbon black (1333-86-4)	
Additional data	*Not a respirable hazard as contained in this liquid mixture
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified

Trimethyl-1, 6-Hexanediamine (25513-64-8)	
LOAEL (oral,rat,90 days)	60 mg/kg body weight Animal: rat
NOAEL (oral,rat,90 days)	10 mg/kg body weight Animal: rat

Carbon black (1333-86-4)	
LOAEC (inhalation,rat,dust/mist/fume,90 days)	0.0071 mg/l air Animal: rat, Animal sex: male
NOAEL (oral,rat,90 days)	> 1000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation,rat,dust/mist/fume,90 days)	0.0011 mg/l air Animal: rat, Animal sex: male

Aspiration hazard	:	Not classified
Viscosity, kinematic	:	No data available
Symptoms/effects after skin contact	:	Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact	:	Serious damage to eyes.
Symptoms/effects after ingestion	:	Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Reactive diluent	
LC50 - Fish [1]	13 mg/l
NOEC chronic algae	29 mg/l

Carbon black (1333-86-4)	
LC50 - Fish [1]	> 1000 mg/l Source: NITE
EC50 - Crustacea [1]	> 5600 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 algae	> 10000 mg/l Source: EHCA

12.2. Persistence and degradability

Bisphenol A diglycidyl ether resin (25085-99-8)	
Persistence and degradability	Not readily biodegradable in water.

Reactive diluent	
Persistence and degradability	Not readily biodegradable in water.

Carbon black (1333-86-4)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Bisphenol A diglycidyl ether resin (25085-99-8)	
Partition coefficient n-octanol/water (Log Pow)	3.242 (Literature)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Reactive diluent	
Partition coefficient n-octanol/water (Log Pow)	-0.15
Bioaccumulative potential	Not bioaccumulative.

Carbon black (1333-86-4)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Bisphenol A diglycidyl ether resin (25085-99-8)	
Ecology - soil	Low potential for mobility in soil.

Carbon black (1333-86-4)	
Surface tension	Not applicable (solid)
Ecology - soil	No (test)data on mobility of the substance available. Not toxic to plants. Not toxic to animals.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

DOT NA No : UN2327
UN-No. (TDG) : UN2327
UN-No. (IMDG) : 2327
UN-No. (IATA) : 2327

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Trimethylhexamethylenediamines (Trimethylhexamethylenediamines)
Proper Shipping Name (TDG) : TRIMETHYLHEXAMETHYLENEDIAMINES (Trimethylhexamethylenediamines)
Proper Shipping Name (IMDG) : TRIMETHYLHEXAMETHYLENEDIAMINES (Trimethylhexamethylenediamines)
Proper Shipping Name (IATA) : Trimethylhexamethylenediamines (Trimethylhexamethylenediamines)

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 8
Hazard labels (DOT) : 8

TDG

Transport hazard class(es) (TDG) : 8
Hazard labels (TDG) : 8

IMDG

Transport hazard class(es) (IMDG) : 8

Hazard labels (IMDG) : 8

IATA

Transport hazard class(es) (IATA) : 8

Hazard labels (IATA) : 8

14.4. Packing group

Packing group (DOT) : III

Packing group (TDG) : III

Packing group (IMDG) : III

Packing group (IATA) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN2327

DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

DOT Vessel Stowage Location : A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other : 52 - Stow ‘‘separated from’’ acids

TDG

UN-No. (TDG)	:	UN2327
Explosive Limit and Limited Quantity Index	:	5 L
Excepted quantities (TDG)	:	E1
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	5 L
Emergency Response Guide (ERG) Number	:	153

IMDG

Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P001, LP01
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	A
Properties and observations (IMDG)	:	Colourless, slightly hygroscopic, combustible liquids. Miscible with water. Irritating to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y841
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	852
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	856
CAO max net quantity (IATA)	:	60L
Special provision (IATA)	:	A803
ERG code (IATA)	:	8L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Trimethyl-1, 6-Hexanediamine (25513-64-8)

Listed on the Canadian DSL (Domestic Substances List)

Bisphenol A diglycidyl ether resin (25085-99-8)

Listed on the Canadian DSL (Domestic Substances List)

Reactive diluent

Listed on the Canadian DSL (Domestic Substances List)

Carbon black (1333-86-4)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Bisphenol A diglycidyl ether resin (25085-99-8)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

Carbon black (1333-86-4)
Listed on IARC (International Agency for Research on Cancer) Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

⚠ **WARNING:** This product can expose you to Carbon black (airborne, unbound particles of respirable size), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Component	State or local regulations
Carbon black(1333-86-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-phrases	
H251	Self-heating; may catch fire
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H332	Harmful if inhaled
H351	Suspected of causing cancer
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.