



## SAFETY DATA SHEET EPO-TEK® E4110 PMF Syringe

### 1. Identification

#### Product identifier

**Product name** EPO-TEK® E4110 PMF Syringe  
**Product number** E4110

#### Recommended use of the chemical and restrictions on use

**Application** Adhesive.  
**Uses advised against** Use only for intended applications.

#### Details of the supplier of the safety data sheet

**Supplier** Epoxy Technology, Inc.  
 14 Fortune Drive  
 Billerica, MA 01821  
 USA  
 (978) 667-3805  
 (978) 663-9782  
 www.epotek.com, SDS@epotek.com

#### Emergency telephone number

**Emergency telephone** ChemTel: +1 (800) 255-3924, +1 (813) 248-0585

### 2. Hazard(s) identification

#### Classification of the substance or mixture

**Physical hazards** Not Classified  
**Health hazards** Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1 - H317  
**Environmental hazards** Aquatic Chronic 2 - H411

#### Label elements

##### Hazard symbols



##### Signal word

Danger

##### Hazard statements

H314 Causes severe skin burns and eye damage.  
 H317 May cause an allergic skin reaction.  
 H411 Toxic to aquatic life with long lasting effects.

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**Precautionary statements**

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.  
 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.  
 P501 Dispose of contents/ container in accordance with national regulations.

**Contains** Epoxy Phenol Novolac, Polyoxypropylenediamine, Reactive Diluent, Reactive Diluent

### Other hazards

**Hazards not otherwise classified (HNOC)** Contains epoxy constituents. May produce an allergic reaction.

### 3. Composition/information on ingredients

#### Mixtures

<b>Silver</b>	<b>60-100%</b>
CAS number: 7440-22-4	
<b>Classification</b>	
Aquatic Chronic 2 - H411	
<b>Epoxy Phenol Novolac</b>	<b>10-30%</b>
CAS number: 9003-36-5	
<b>Classification</b>	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
Skin Sens. 1 - H317	
Aquatic Chronic 2 - H411	
<b>Polyoxypropylenediamine</b>	<b>5-10%</b>
CAS number: 9046-10-0	
<b>Classification</b>	
Acute Tox. 4 - H302	
Skin Corr. 1B - H314	
Eye Dam. 1 - H318	
<b>Reactive Diluent</b>	<b>1-5%</b>
CAS number: Proprietary	
<b>Classification</b>	
Acute Tox. 4 - H302	
Acute Tox. 4 - H312	
Acute Tox. 4 - H332	
Skin Irrit. 2 - H315	
Eye Dam. 1 - H318	
Skin Sens. 1 - H317	

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<b>Reactive Diluent</b>	<b>1-5%</b>
CAS number: Proprietary	
<b>Classification</b>	
Acute Tox. 4 - H302	
Eye Dam. 1 - H318	
STOT SE 3 - H336	

The full text for all hazard statements is displayed in Section 16.

### 4. First-aid measures

#### Description of first aid measures

<b>Inhalation</b>	Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
<b>Skin Contact</b>	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
<b>Eye contact</b>	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

#### Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	Gas or vapor in high concentrations may irritate the respiratory system.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Skin contact</b>	Causes severe burns. May cause sensitisation by skin contact.
<b>Eye contact</b>	Causes serious eye damage.

#### Indication of immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	Treat symptomatically.
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### 5. Fire-fighting measures

#### Extinguishing media

**Suitable extinguishing media** Dry chemicals. Foam. Carbon dioxide (CO<sub>2</sub>).

#### Special hazards arising from the substance or mixture

**Hazardous combustion products** Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO).

#### Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapors. Use water to keep fire exposed containers cool and disperse vapors.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet.

#### Environmental precautions

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**Environmental precautions** Avoid discharge to the aquatic environment.

### Methods and material for containment and cleaning up

**Methods for cleaning up** Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

**Reference to other sections** For personal protection, see Section 8.

## 7. Handling and storage

### Precautions for safe handling

**Usage precautions** Avoid spilling. Avoid contact with skin and eyes.

**Advice on general occupational hygiene** Provide eyewash station and safety shower. Do not eat, drink or smoke when using this product. Wash after use and before eating, smoking and using the toilet. Wash contaminated clothing before reuse.

### Conditions for safe storage, including any incompatibilities

**Storage precautions** Store at -40°C. Keep container tightly sealed when not in use.

**Storage class** Chemical storage.

### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

## 8. Exposure controls/Personal protection

### Control parameters

### Occupational exposure limits

#### Silver

Long-term exposure limit (8-hour TWA): 0.1

### Exposure controls

#### Protective equipment



**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Avoid inhalation of vapors.

**Eye/face protection** Wear tight-fitting, chemical splash goggles or face shield.

**Hand protection** It is recommended that chemical-resistant, impervious gloves are worn.

**Other skin and body protection** Wear appropriate clothing to prevent any possibility of skin contact.

**Hygiene measures** Provide eyewash station. Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

**Respiratory protection** If ventilation is inadequate, suitable respiratory protection must be worn.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

## EPO-TEK® E4110 PMF Syringe

<b>Appearance</b>	Paste.
<b>Color</b>	Silver.
<b>Odor</b>	Mild.
<b>Odor threshold</b>	No specific test data are available.
<b>pH</b>	No specific test data are available.
<b>Melting point</b>	No specific test data are available.
<b>Initial boiling point and range</b>	No specific test data are available.
<b>Flash point</b>	> 93°C
<b>Evaporation rate</b>	< BuAc
<b>Evaporation factor</b>	No specific test data are available.
<b>Flammability (solid, gas)</b>	No specific test data are available.
<b>Upper/lower flammability or explosive limits</b>	No specific test data are available.
<b>Vapor pressure</b>	No specific test data are available.
<b>Vapor density</b>	> 1
<b>Relative density</b>	No specific test data are available.
<b>Solubility(ies)</b>	No specific test data are available.
<b>Partition coefficient</b>	No specific test data are available.
<b>Auto-ignition temperature</b>	No specific test data are available.
<b>Decomposition Temperature</b>	No specific test data are available.
<b>Viscosity</b>	No specific test data are available.
<b>Other information</b>	None.

### 10. Stability and reactivity

<b>Reactivity</b>	The following materials may react with the product: Strong acids. Strong alkalis.
<b>Stability</b>	Stable at normal ambient temperatures.
<b>Possibility of hazardous reactions</b>	May polymerize.
<b>Conditions to avoid</b>	Avoid excessive heat for prolonged periods of time. Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight.
<b>Materials to avoid</b>	Strong alkalis. Strong acids.
<b>Hazardous decomposition products</b>	Thermal decomposition or combustion products may include the following substances: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

### 11. Toxicological information

#### Information on toxicological effects

#### Acute toxicity - oral

## EPO-TEK® E4110 PMF Syringe

ATE oral (mg/kg) 3,064.57

**Acute toxicity - dermal**

ATE dermal (mg/kg) 28,754.47

**Acute toxicity - inhalation**

ATE inhalation (gases ppm) 117,631.9

ATE inhalation (vapours mg/l) 287.54

ATE inhalation (dusts/mists mg/l) 39.21

**Inhalation** Inhalation of dust during cutting, grinding or sanding operations involving this product may cause irritation of the respiratory tract. Gas or vapor in high concentrations may irritate the respiratory system.

**Ingestion** May cause discomfort if swallowed.

**Skin Contact** Causes severe burns. May cause sensitisation by skin contact.

**Eye contact** Causes burns. Causes serious eye damage.

### 12. Ecological information

**Ecotoxicity** Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Acute aquatic toxicity**

**Acute toxicity - fish** Not available.

**Persistence and degradability**

**Persistence and degradability** No data available.

**Bioaccumulative potential**

**Bio-Accumulative Potential** No data available on bioaccumulation.

**Partition coefficient** No specific test data are available.

**Mobility in soil**

**Mobility** No data available.

**Other adverse effects**

**Other adverse effects** Not known.

### 13. Disposal considerations

**Waste treatment methods**

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### 14. Transport information

**UN Number**

UN No. (TDG) 2735

UN No. (IMDG) 2735

UN No. (ICAO) 2735

**EPO-TEK® E4110 PMF Syringe**

UN No. (DOT) UN2735

**UN proper shipping name**

**Proper shipping name (TDG)** AMINES, LIQUID, CORROSIVE, N.O.S. (User to define)

**Proper shipping name (IMDG)** AMINES, LIQUID, CORROSIVE, N.O.S. (User to define)

**Proper shipping name (ICAO)** AMINES, LIQUID, CORROSIVE, N.O.S. (User to define)

**Proper shipping name (DOT)** AMINES, LIQUID, CORROSIVE, N.O.S. (User to define)

**Transport hazard class(es)**

DOT hazard class 8

DOT hazard label 8

TDG class 8

TDG label(s) 8

IMDG Class 8

ICAO class/division 8

**Transport labels****DOT transport labels****Packing group**

TDG Packing Group III

IMDG packing group III

ICAO packing group III

DOT packing group III

**Environmental hazards****Environmentally Hazardous Substance****Special precautions for user**

IMDG Code segregation group 18. Alkalis

EmS F-A, S-B

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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### 15. Regulatory information

**Regulatory References** Proprietary information protected pursuant to WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), Section 7, Art. 39.

#### US Federal Regulations

##### **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are required to be listed.

##### **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

The following ingredients are listed:

*Silver*

1,000 lbs (454 Kg)

##### **SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None of the ingredients are required to be listed.

##### **SARA 313 Emission Reporting**

The following ingredients are listed:

*Silver*

##### **CAA Accidental Release Prevention**

None of the ingredients are required to be listed.

##### **OSHA Highly Hazardous Chemicals**

None of the ingredients are required to be listed.

#### US State Regulations

##### **California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are required to be listed.

##### **California Air Toxics "Hot Spots" (A-I)**

The following ingredients are listed:

*Silver*

##### **California Air Toxics "Hot Spots" (A-II)**

None of the ingredients are required to be listed.

##### **Massachusetts "Right To Know" List**

The following ingredients are listed:

*Silver*

##### **Rhode Island "Right To Know" List**

The following ingredients are listed:

*Silver*

##### **Minnesota "Right To Know" List**

The following ingredients are listed:

*Silver*

##### **New Jersey "Right To Know" List**

The following ingredients are listed:

*Silver*



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### Pennsylvania "Right To Know" List

The following ingredients are listed:

*Silver*

### Inventories

#### EU - EINECS/ELINCS

Some of the ingredients are listed or exempt.

#### Canada - DSL/NDSL

All the ingredients are listed or exempt.

#### US - TSCA

All the ingredients are listed or exempt.

#### US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

#### Australia - AICS

All the ingredients are listed or exempt.

#### Japan - ENCS

Some of the ingredients are listed or exempt.

#### Korea - KECI

All the ingredients are listed or exempt.

#### China - IECSC

All the ingredients are listed or exempt.

#### Philippines - PICCS

All the ingredients are listed or exempt.

### 16. Other information

<b>Revision date</b>	8/14/2019
<b>Revision</b>	1
<b>Hazard statements in full</b>	<p>H302 Harmful if swallowed.</p> <p>H312 Harmful in contact with skin.</p> <p>H314 Causes severe skin burns and eye damage.</p> <p>H315 Causes skin irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H318 Causes serious eye damage.</p> <p>H319 Causes serious eye irritation.</p> <p>H332 Harmful if inhaled.</p> <p>H336 May cause drowsiness or dizziness.</p> <p>H411 Toxic to aquatic life with long lasting effects.</p>

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