

# SAFETY DATA SHEET (SDS)

**Manufacturer:**

Epo-Tek®

**Product Name:**

EPO-TEK® H20E Electrically Conductive Silver Epoxy, Heat Cure - Pre-Mixed and Frozen (3cc Syringe)

**Manufacturer Part Number:**

ETH20E-3CC

▶ Click here for more details on the EPO-TEK® H20E Electrically Conductive Silver Epoxy, Heat Cure - Pre-Mixed and Frozen (3cc Syringe)



A Meridian Adhesives Group Company

**EPO-TEK® H20E PMF SYRINGE****Safety Data Sheet**according to Federal Register / Vol. 77, No. 58 / Monday, March 28, 2012 / Rules and Regulations  
Issue date: 3/2/2022 Revision date: 1/28/2023 Supersedes: 3/2/2022 Version: 2.0**SECTION 1: Identification****1.1. Identification**

Product form : Mixture  
Product name : EPO-TEK® H20E PMF SYRINGE

**1.2. Recommended use and restrictions on use**

Use of the substance/mixture : Adhesives  
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, 01821  
USA  
T 978-667-3805 - F 978-663-9782  
[www.epotek.com](http://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**

|  |      |  |
|--|------|--|
| Acute toxicity (oral) Category 4                                 | H302 | Harmful if swallowed                                 |
| Skin corrosion/irritation Category 2                             | H315 | Causes skin irritation                               |
| 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 – Acute Hazard Category 1   | H400 | Very toxic to aquatic life                           |
| Hazardous to the aquatic environment – Chronic Hazard Category 1 | H410 | Very 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)

: H302 - Harmful if swallowed  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.

Precautionary statements (GHS US)

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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+P312 - If swallowed: Call a poison center or doctor if you feel unwell.  
P302+P352 - If on skin: Wash with plenty of water.  
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).  
P330 - Rinse mouth.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P363 - Wash contaminated clothing before reuse.  
P391 - Collect spillage.  
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   |
|----------------------------|-----------------------|---------|---|
| Silver                     | CAS-No.: 7440-22-4    | ≥ 60    | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410  |
| Epoxy phenol novolac resin | CAS-No.: 9003-36-5    | 10 – 30 | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 2, H411                    |
| Reactive diluent*          | CAS-No.: Trade Secret | 1 – 5   | Acute Tox. 4 (Oral), H302<br>Eye Dam. 1, H318<br>STOT SE 3, H336                        |
| Substituted imidazole*     | CAS-No.: Trade Secret | 1 – 5   | Acute Tox. 3 (Oral), H301<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>STOT SE 3, H335 |

\*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.

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 poison center/doctor/physician if you feel unwell.

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|                                       |  |
|---------------------------------------|--|
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing.   |
| First-aid measures after skin contact | : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.                   |
| 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. Call a poison center/doctor/physician if you feel unwell.   |

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

|                                     |  |
|-------------------------------------|--|
| Symptoms/effects after skin contact | : Irritation. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact  | : Serious damage to eyes.                          |

#### 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. Avoid breathing 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.

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#### 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. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray.   |
| 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 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          | : Silver            |
| Odor           | : Mild odor         |
| Odor threshold | : No data available |
| pH             | : No data available |

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|   |                     |
|---|---------------------|
| Melting point                                   | : Not applicable    |
| 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)       | : Harmful if swallowed. |
| Acute toxicity (dermal)     | : Not classified        |
| Acute toxicity (inhalation) | : Not classified        |

#### EPO-TEK® H20E PMF SYRINGE

|               |                            |
|---------------|----------------------------|
| ATE US (oral) | 1433.949 mg/kg body weight |
|---------------|----------------------------|

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|   |   |
|---|---|
| <b>Silver (7440-22-4)</b>                     |   |
| LD50 oral rat                                 | > 2000 mg/kg Source: ECHA   |
| LD50 dermal rat                               | > 2000 mg/kg Source: ECHA   |
| LC50 Inhalation - Rat                         | > 5.16 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)  |
| ATE US (oral)                                 | 5000 mg/kg body weight  |
| ATE US (dermal)                               | 2500 mg/kg body weight  |
| <b>Reactive diluent</b>                       |   |
| LD50 oral rat                                 | 1582 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 8 day(s))  |
| LC50 Inhalation - Rat                         | > 5.1 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (mixture of vapour and aerosol), 14 day(s))                  |
| ATE US (oral)                                 | 800 mg/kg body weight   |
| ATE US (dermal)                               | 5600 mg/kg body weight  |
| ATE US (dust, mist)                           | 5.1 mg/l/4h   |
| <b>Substituted imidazole</b>                  |   |
| ATE US (oral)                                 | 100 mg/kg body weight   |
| Skin corrosion/irritation                     | : Causes skin irritation.   |
| 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  |
| <b>Reactive diluent</b>                       |   |
| NOAEL (chronic,oral,animal/male,2 years)      | 225 mg/kg body weight Animal: rat, Animal sex: male, Guideline: other:NTP Protocol, Remarks on results: other:Effect type: carcinogenicity (migrated information)   |
| NOAEL (chronic,oral,animal/female,2 years)    | 450 mg/kg body weight Animal: rat, Animal sex: female, Guideline: other:NTP Protocol, Remarks on results: other:Effect type: carcinogenicity (migrated information) |
| IARC group                                    | 3 - Not classifiable  |
| Reproductive toxicity                         | : Not classified  |
| STOT-single exposure                          | : Not classified  |
| <b>Reactive diluent</b>                       |   |
| STOT-single exposure                          | May cause drowsiness or dizziness.  |
| <b>Substituted imidazole</b>                  |   |
| STOT-single exposure                          | May cause respiratory irritation.   |
| STOT-repeated exposure                        | : Not classified  |
| <b>Silver (7440-22-4)</b>                     |   |
| LOAEL (oral,rat,90 days)                      | 125 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)  |
| <b>Epoxy phenol novolac resin (9003-36-5)</b> |   |
| NOAEL (oral,rat,90 days)                      | ≈ 250 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)  |
| Aspiration hazard                             | : Not classified  |

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Viscosity, kinematic : No data available  
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Serious damage to eyes.

### SECTION 12: Ecological information

#### 12.1. Toxicity

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

##### Silver (7440-22-4)

|                 |   |
|-----------------|---|
| LC50 - Fish [1] | 4.7 µg/l Test organisms (species): Pimephales promelas  |
| LC50 - Fish [2] | 89.4 µg/l Test organisms (species): Pimephales promelas   |
| ErC50 algae     | 0.285 µg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |

##### Reactive diluent

|                      |   |
|----------------------|---|
| LC50 - Fish [1]      | 56 mg/l (Equivalent or similar to OECD 203, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Nominal concentration) |
| EC50 - Crustacea [1] | > 500 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)                             |
| ErC50 algae          | > 1000 mg/l (DIN 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Estimated value)                     |

##### Epoxy phenol novolac resin (9003-36-5)

|                      |  |
|----------------------|--|
| LC50 - Fish [1]      | 1.9 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Semi-static system, Fresh water, Weight of evidence)         |
| EC50 - Crustacea [1] | 3.5 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Weight of evidence, GLP) |
| LC50 - Fish [2]      | 1000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)   |
| LOEC (chronic)       | 1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |
| NOEC (chronic)       | 0.3 mg/l Test organisms (species): Daphnia magna Duration: '21 d'  |

#### 12.2. Persistence and degradability

##### Silver (7440-22-4)

|                               |   |
|-------------------------------|---|
| Persistence and degradability | Biodegradability in soil: not applicable. Biodegradability: not applicable. |
| Chemical oxygen demand (COD)  | Not applicable (inorganic)  |
| ThOD                          | Not applicable (inorganic)  |

##### Reactive diluent

|                               |  |
|-------------------------------|--|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. |
| ThOD                          | 1.67 g O <sub>2</sub> /g substance                         |

##### Epoxy phenol novolac resin (9003-36-5)

|                               |                                     |
|-------------------------------|-------------------------------------|
| Persistence and degradability | Not readily biodegradable in water. |
|-------------------------------|-------------------------------------|

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#### 12.3. Bioaccumulative potential

##### Silver (7440-22-4)

|                           |  |
|---------------------------|--|
| BCF - Fish [1]            | 70 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500).                                 |

##### Reactive diluent

|   |   |
|---|---|
| BCF - Other aquatic organisms [1]               | 3.162 l/kg (BCFBAF v3.00, Calculated value, Fresh weight)   |
| Partition coefficient n-octanol/water (Log Pow) | -0.566 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C) |
| Bioaccumulative potential                       | Not bioaccumulative.  |

##### Epoxy phenol novolac resin (9003-36-5)

|   |  |
|---|--|
| Partition coefficient n-octanol/water (Log Pow) | 2.7 – 3.6 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method) |
| Bioaccumulative potential                       | Low potential for bioaccumulation (Log Kow < 4).   |

#### 12.4. Mobility in soil

##### Silver (7440-22-4)

|                |   |
|----------------|---|
| Ecology - soil | No (test)data on mobility of the substance available. |
|----------------|---|

##### Reactive diluent

|  |  |
|--|--|
| Surface tension  | No data available (test not performed)                       |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 0.544 – 0.811 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil   | Highly mobile in soil.                                       |

##### Epoxy phenol novolac resin (9003-36-5)

|  |   |
|--|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.65 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value) |
| Ecology - soil   | Low potential for mobility in soil.   |

#### 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 : UN3082  
UN-No. (TDG) : UN3082

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# SAFETY DATA SHEET (SDS)

**Manufacturer:**

Epo-Tek®

**Product Name:**

EPO-TEK® H20E Electrically Conductive Silver Epoxy, Heat Cure - Pre-Mixed and Frozen (3cc Syringe)

**Manufacturer Part Number:**

ETH20E-3CC

[Click here for more details on the EPO-TEK® H20E Electrically Conductive Silver Epoxy, Heat Cure - Pre-Mixed and Frozen \(3cc Syringe\)](#)

## EPO-TEK® H20E PMF SYRINGE

### Safety Data Sheet

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

UN-No. (IMDG) : 3082  
UN-No. (IATA) : 3082

#### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s. (Silver, Epoxy Phenol Novolac)  
Proper Shipping Name (TDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver, Epoxy Phenol Novolac)  
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver, Epoxy Phenol Novolac)  
Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s. (Silver, Epoxy Phenol Novolac)

#### 14.3. Transport hazard class(es)

DOT : 9  
Transport hazard class(es) (DOT) : 9  
Hazard labels (DOT)



TDG : 9  
Transport hazard class(es) (TDG) : 9  
Hazard labels (TDG)



IMDG : 9  
Transport hazard class(es) (IMDG) : 9  
Hazard labels (IMDG)



IATA : 9  
Transport hazard class(es) (IATA) : 9  
Hazard labels (IATA)



#### 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

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Marine pollutant

: Yes



Other information

: No supplementary information available.

#### 14.6. Special precautions for user

DOT

UN-No.(DOT)

DOT Special Provisions (49 CFR 172.102)

: UN3082

: 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.

146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.

173 - An appropriate generic entry may be used for this material.

335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s.", UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.

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.

TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx)

: 155

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)

: No Limit

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

: No Limit

DOT Vessel Stowage Location

: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

TDG

UN-No. (TDG)

: UN3082

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## EPO-TEK® H20E PMF SYRINGE

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|  |  |
|--|--|
| TDG Special Provisions                       | : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks).<br>(2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name:<br>(a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.;<br>(b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S.;<br>(c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S.;<br>(d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.; or<br>(e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S.<br>(3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment:<br>(a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or<br>(b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS, 99 - (1) Mixtures of solids that are not dangerous goods and liquids or solids that are UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. or UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. may be handled, offered for transport or transported as UN3077 if there is no visible liquid when the dangerous goods are loaded into a means containment and during transport.<br>(2) These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety. |
| Explosive Limit and Limited Quantity Index   | : 5 L  |
| Excepted quantities (TDG)                    | : E1   |
| Emergency Response Guide (ERG) Number        | : 171  |
| <b>IMDG</b>                                  |  |
| Special provision (IMDG)                     | : 274, 335, 969  |
| Limited quantities (IMDG)                    | : 5 L  |
| Excepted quantities (IMDG)                   | : E1   |
| Packing instructions (IMDG)                  | : LP01, P001   |
| Packing provisions (IMDG)                    | : PP1  |
| IBC packing instructions (IMDG)              | : IBC03  |
| Tank instructions (IMDG)                     | : T4   |
| Tank special provisions (IMDG)               | : TP1, TP29  |
| EmS-No. (Fire)                               | : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE   |
| EmS-No. (Spillage)                           | : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS  |
| Stowage category (IMDG)                      | : A  |
| <b>IATA</b>                                  |  |
| PCA Excepted quantities (IATA)               | : E1   |
| PCA Limited quantities (IATA)                | : Y964   |
| PCA limited quantity max net quantity (IATA) | : 30kgG  |
| PCA packing instructions (IATA)              | : 964  |
| PCA max net quantity (IATA)                  | : 450L   |
| CAO packing instructions (IATA)              | : 964  |
| CAO max net quantity (IATA)                  | : 450L   |

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Special provision (IATA) : A97, A158, A197, A215  
ERG code (IATA) : 9L

#### 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

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

|        |                   |       |
|--------|-------------------|-------|
| Silver | CAS-No. 7440-22-4 | ≥ 60% |
|--------|-------------------|-------|

#### Silver (7440-22-4)

|           |         |
|-----------|---------|
| CERCLA RQ | 1000 lb |
|-----------|---------|

#### 15.2. International regulations

##### CANADA

#### Silver (7440-22-4)

Listed on the Canadian DSL (Domestic Substances List)

#### Reactive diluent

Listed on the Canadian DSL (Domestic Substances List)

#### Substituted imidazole

Listed on the Canadian DSL (Domestic Substances List)

#### Epoxy phenol novolac resin (9003-36-5)

Listed on the Canadian DSL (Domestic Substances List)

##### EU-Regulations

No additional information available

##### National regulations

#### Silver (7440-22-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Reactive diluent

Listed on INSQ (Mexican National Inventory of Chemical Substances)

#### Epoxy phenol novolac resin (9003-36-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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#### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

| Component         | State or local regulations  |
|-------------------|---|
| Silver(7440-22-4) | U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances 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

Revision date : 01/26/2023

| Full text of H-phrases |  |
|------------------------|--|
| H301                   | Toxic if swallowed                                   |
| H302                   | Harmful if swallowed                                 |
| H315                   | Causes skin irritation                               |
| H317                   | May cause an allergic skin reaction                  |
| H318                   | Causes serious eye damage                            |
| H335                   | May cause respiratory irritation                     |
| H336                   | May cause drowsiness or dizziness                    |
| H400                   | Very toxic to aquatic life                           |
| H410                   | Very toxic to aquatic life with long lasting effects |
| H411                   | Toxic 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.

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