

# Safety Data Sheet

A Meridian Adhesives Group Company

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Issue date: 3/1/2023 Version: 1.0

### **SECTION 1: Identification** 1.1. Identification Product form : Mixture Product name EPO-TEK® MED-H20S 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 USA T 978-667-3805 - F 978-663-9782 www.epotek.com 1.4. Emergency telephone number : VelocityEHS: +1 (800) 255-3924, +1 (813) 248-0585 Emergency number 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 correction/irritation Catagon / 2 11045 Courses akin irritation

Skin conosion/initiation Category 2	H315	Causes skin initation
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Germ cell mutagenicity Category 2	H341	Suspected of causing genetic defects
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) Hazard statements (GHS US)



Danger :

- H302 Harmful if swallowed
  - H315 Causes skin irritation
  - H317 May cause an allergic skin reaction
  - H318 Causes serious eye damage
  - H341 Suspected of causing genetic defects
- H400 Very toxic to aquatic life
- H410 Very toxic to aquatic life with long lasting effects

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Precautionary statements (GHS US)	<ul> <li>P201 - Obtain special instructions before use.</li> <li>P202 - Do not handle until all safety precautions have been read and understood.</li> <li>P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.</li> <li>P264 - Wash hands, forearms and face thoroughly after handling.</li> <li>P270 - Do not eat, drink or smoke when using this product.</li> <li>P272 - Contaminated work clothing must not be allowed out of the workplace.</li> </ul>
	<ul> <li>P273 - Avoid release to the environment.</li> <li>P280 - Wear protective gloves/protective clothing/eye protection/face protection.</li> <li>P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.</li> <li>P302+P352 - If on skin: Wash with plenty of water.</li> <li>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</li> <li>P308+P313 - If exposed or concerned: Get medical advice/attention.</li> <li>P310 - Immediately call a poison center or doctor.</li> <li>P321 - Specific treatment (see supplemental first aid instruction on this label).</li> <li>P332+P313 - If skin irritation occurs: Get medical advice/attention.</li> <li>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.</li> </ul>
	<ul> <li>P362+P364 - Take off contaminated clothing and wash it before reuse.</li> <li>P363 - Wash contaminated clothing before reuse.</li> <li>P391 - Collect spillage.</li> <li>P405 - Store locked up.</li> <li>P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.</li> </ul>

 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 Aquatic Chronic 1, H410
Bisphenol A diglycidyl ether resin	CAS-No.: 25085-99-8	10 – 30	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Reactive diluent*	CAS-No.: Trade Secret	1 – 5	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 STOT SE 3, H336
Substituted imidazole*	CAS-No.: Trade Secret	1 – 5	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

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Name	Product identifier	%	GHS US classification
Reactive Diluent*	CAS-No.: Trade Secret		Skin Irrit. 2, H315 Skin Sens. 1, H317 Muta. 2, H341 Aquatic Chronic 2, H411

: Components not listed are either non-hazardous or are below reportable limits.

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

Comments

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	: IF exposed or concerned: Get medical advice/attention. Call a poison center/doctor/physician if you feel unwell.	
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 Symptoms/effects after eye contact	<ul><li>Irritation. May cause an allergic skin reaction.</li><li>Serious damage to eyes.</li></ul>	

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".		

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6.2. Environmental precautions	
Avoid release to the environment.	
6.3. Methods and material for contain	nment and cleaning up
For containment Methods for cleaning up	<ul> <li>Collect spillage.</li> <li>Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.</li> </ul>
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	e
7.1. Precautions for safe handling	
Precautions for safe handling Hygiene measures	<ul> <li>Ensure good ventilation of the work station. Obtain special instructions before use. Do not handl until all safety precautions have been read and understood. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray.</li> <li>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</li> </ul>
7.2. Conditions for safe storage, inclu	after handling the product.
Storage conditions	: Store locked up. Store in a well-ventilated place. Keep cool.
SECTION 8: Exposure controls/p	ersonal protection
8.1. Control parameters	
No additional information available	
8.2. Appropriate engineering controls	5
Appropriate engineering controls Environmental exposure controls	<ul><li>Ensure good ventilation of the work station.</li><li>Avoid release to the environment.</li></ul>
8.3. Individual protection measures/F	Personal protective equipment
Hand protection:	
a decision that depends not only on the type	enetration. Neoprene or nitrile rubber gloves. Butyl-rubber protective gloves. Choosing the proper glove is a of material, but also on other quality features, which differ for each manufacturer. Refer to manufacturer's each use and whenever signs of wear or perforation appear
Eye protection:	
Safety glasses	
Skin and body protection:	
Wear suitable protective clothing	

Wear suitable protective clothing

# **Respiratory protection:**

[In case of inadequate ventilation] wear respiratory protection.

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### 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 odour
Odor threshold	: No data available
рН	: 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

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# **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	11.1. Information on toxicological effects		
Acute toxicity (dermal) Acute toxicity (inhalation)	Harmful if swallowed. Not classified Not classified		
EPO-TEK® MED-H20S PMF SYRINGE			
ATE US (oral)	1425.771 mg/kg body weight		
Silver (7440-22-4)			
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		
Substituted imidazole			
ATE US (oral)	100 mg/kg body weight		
Reactive diluent			
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		
Reactive Diluent			
LD50 oral rat	> 5000 mg/kg (Rat, Oral)		
LD50 dermal rat	> 2000 mg/kg (Rat, Dermal)		
LC50 Inhalation - Rat	6.09 mg/l (4 h, Rat, Inhalation)		
ATE US (oral)	5000 mg/kg body weight		
ATE US (dermal)	2500 mg/kg body weight		
ATE US (vapors)	6.09 mg/l/4h		
ATE US (dust, mist)	6.09 mg/l/4h		
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)		
Skin corrosion/irritation	Causes skin irritation.		

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Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: Not classified
Reactive diluent	
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
Substituted imidazole	
STOT-single exposure	May cause respiratory irritation.
Reactive diluent	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified
Silver (7440-22-4)	
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)
Aspiration hazard	: Not classified
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)	
Reactive Diluent		
LC50 - Fish [1]	1 – 10 mg/l (Pisces)	

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EGS0 - Custacce (1)         1 - 10 mg/ (Invertebrata)           ESG0 - Custacce (1)         1 - 10 mg/ (Invertebrata)           Stiver (7440-22.4)         Edodgradability in soli. not applicable. Biodgradability: not applicable.           Persistence and degradability         Isodgradability in soli. not applicable. Biodgradability: not applicable.           Reactive diluont         Isodgradability in soli. not applicable. Invegator           Persistence and degradability         Biodgradability in soli. no data available. Not readity biodgradable in water.           Reactive Diluent         Isodgradability in soli. no data available. Not readity biodgradable in water.           Reactive Diluent         Vice readity biodgradability in soli. no data available. Not readity biodgradable in water.           Reactive Diluent         Vice readity biodgradable in				
12.2. Persistence and degradability         Silver (7440-22-4)         Persistence and degradability       Biodegradability in soli: not applicable. Biodegradability: not applicable.         Chemical oxygen demand (COD)       Not applicable (inorganic)         ThOD       Not applicable (inorganic)         Reactive diluent       Biodegradability of 0, 0 g oxy substance         Persistence and degradability       Biodegradability in soli: no data available. Not readily biodegradable in water.         ThOD       1.67 g O, 2 g substance         Reactive Diluent       Persistence and degradability         Persistence and degradability       Biodegradability in soli: no data available. Not readily biodegradable in water.         Bisphonol A diglycidyl ether resin (25085-99-5)       Persistence and degradability         Persistence and degradability       Biodegradability in soli: no data available. Not readily biodegradable in water.         12.3. Bioaccumulative potential       Low potential for bioaccumulation (BCF < 500).				
Silver (7440-22-4)           Persistence and degradability         Biodegradability in soil: not applicable. Biodegradability: not applicable.           Chemical oxygen demand (COD)         Not applicable (norganic)           ThOD         Not applicable (norganic)           Reactive diluent         Eventsence and degradability         Biodegradabile in the soil. Readily biodegradable in water.           Presistence and degradability         Biodegradability in soil: no data available. Not readily biodegradable in water.           Presistence and degradability         Biodegradability in soil: no data available. Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-999-         Vertradity biodegradable in water.           Persistence and degradability         Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-999-         Vertradity Diodegradable in water.           Bisphenol A diglycidyl ether resin (25085-999-         Not readily biodegradable in water.           Biosecumulative potential         Not readily biodegradable in water.           Biosecumulative potential         70 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)           Biosecumulative potential         3.162 l/kg (BCFBAF v3.00, Calculated value, Fresh weight)           Persition coefficient n-octanol/water (Log Pow)         3.162 l/kg (BCFBAF v3.00, Calculated value, Fresh weight)           Persiti	EC50 - Crustacea [1]	1 – 10 mg/l (Invertebrata)		
Persistence and degradability         Biodegradability in soil: not applicable. Biodegradability: not applicable.           Chemical oxygen demand (COD)         Not applicable (inorganic)           ThOD         Not applicable (inorganic)           Reactive diluent         Biodegradability in soil: not applicable in water.           Persistence and degradability         Biodegradability in soil: not available in water.           Reactive Diluent         Biodegradability in soil: not available. Not readily biodegradable in water.           Persistence and degradability         Biodegradability in soil: not ata available. Not readily biodegradable in water.           Persistence and degradability         Biodegradability in soil: not available. Not readily biodegradable in water.           Persistence and degradability         Biodegradability in soil: not available. Not readily biodegradable in water.           Persistence and degradability         Not readily biodegradabl	12.2. Persistence and degradability			
Chemical oxygen demand (COD)         Not applicable (inorganic)           ThOD         Not applicable (inorganic)           Reactive diluent         Biodegradable in the soil. Readily biodegradable in water.           ThOD         1.67 g O <sub>2</sub> /g substance           Reactive Diluent         Biodegradable in soil: no data available. Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-98-)         Persistence and degradability in soil: no data available. Not readily biodegradable in water.           12.3. Bioaccumulative potential         Not readily biodegradable in water.           Silver (7440-22-4)         Bo (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)           Bioaccumulative potential         Low potential for bioaccumulation (BCF < 500).	Silver (7440-22-4)			
ThOD         Not applicable (inorganic)           Reactive diluent         Biodegradable in the soil. Readily biodegradable in water.           Presistence and degradability         Biodegradabile in the soil. Readily biodegradable in water.           ThOD         1.67 g O <sub>2</sub> /g substance           Reactive Diluent         Biodegradability in soil: no data available. Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-99-)         Persistence and degradability           Persistence and degradability         Not readily biodegradable in water.           12.3. Bioaccumulative potential         Vor readily biodegradable in water.           12.4. Bioaccumulative potential         70 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)           Bioaccumulative potential         Low potential for bioaccumulation (BCF < 500).	Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.		
Reactive diluent         Biodegradable in the soil. Readily biodegradable in water.           Presistence and degradability         Biodegradable in the soil. Readily biodegradable in water.           Reactive Diluent         Biodegradability in soil: no data available. Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-99-8)         Persistence and degradability           Not readily biodegradable in water.         Biodegradability           12.3. Bioaccumulative potential         Not readily biodegradable in water.           12.3. Bioaccumulative potential         Dav potential for bioaccumulation (BCF < 500).	Chemical oxygen demand (COD)	Not applicable (inorganic)		
Persistence and degradability         Biodegradable in the soil. Readily biodegradable in water.           ThOD         1.67 g O <sub>c</sub> /g substance           Reactive Diluent         Biodegradability in soil: no data available. Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-99	ThOD	Not applicable (inorganic)		
ThOD         1.87 g Q <sub>2</sub> /g substance           Reactive Diluent         Biodegradability in soit: no data available. Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-99-5)         Versistence and degradability         Not readily biodegradable in water.           12.3. Bioaccumulative potential         Not readily biodegradable in water.         Versistence           Stiver (7440-22-4)         70 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)         Descumulative potential           BCF - Fish [1]         70 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)         Descumulation (BCF < 500).           Reactive diluent         Versistence         Versistence         Versistence           BCF - Other aquati 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.           Reactive Diluent         Versistence         Versistence           Bioaccumulative potential         Low potential for bioaccumulation (Log Kow < 4).           Bisphenol A diglycidyl ether resin (25085-99-87)         Partition coefficient n-octanol/water (Log Pow)         3.242 (Literature)           Bioaccumulative potential         Low potential for bioaccumulatio	Reactive diluent			
Reactive Diluent         Biodegradability is soil: no data available. Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-99-8)         Persistence and degradability         Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-99-8)         Persistence and degradability         Not readily biodegradable in water.           12.3. Bioaccumulative potential         Vor readily biodegradable in water.         Vor readily biodegradable in water.           Silver (7440-22-4)         BCP - Fish [1]         70 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)           Bioaccumulative potential         Low potential for bioaccumulation (BCF < 500).	Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.		
Presistence and degradability         Biodegradability in soil: no data available. Not readily biodegradable in water.           Bisphenol A diglycidyl ether resin (25085-99-)         Not readily biodegradable in water.           Persistence and degradability         Not readily biodegradable in water.           12.3. Bioaccumulative potential         Vot readily biodegradable in water.           Silver (7440-22-4)         Presistence and big and bility in soil: no data available. Not readily biodegradable in water.           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         Solf Vig (BCFBAF v3.00, Calculated value, Fresh weight)           Partition coefficient n-octanol/water (Log Pow)         Chie Gexperimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Michol, 25 °C)           Bioaccumulative potential         Not bioaccumulative.         Cech value           Bioaccumulative potential         Stif Cistimated value)         Cech value           Bioaccumulative potential         Stif Cistimated value)         Stif Cistimated value)           Bioaccumulative potential         Stif Cistimated value)         Stif Cistimated value)           Bioaccumulative potential         Stif Cistimated value)         Stif Cistimated value)           Bioaccumulative potential <td>ThOD</td> <td>1.67 g O<sub>2</sub> /g substance</td>	ThOD	1.67 g O <sub>2</sub> /g substance		
Bisphenol A diglycidyl ether resin (25085-99-8)           Persistence and degradability         Not readily biodegradable in water.           12.3. Bioaccumulative potential         International Contemporation of the substance available.           Silver (7440-22-4)         T0 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)           Bioaccumulative potential         Low potential for bioaccumulation (BCF < 500).	Reactive Diluent			
Persistence and degradability         Not readily biodegradable in water.           12.3. Bioaccumulative potential         Image: Stream of the	Persistence and degradability	Biodegradability in soil: no data available. Not readily biodegradable in water.		
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).	Bisphenol A diglycidyl ether resin (25085-99-	B)		
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).	Persistence and degradability	Not readily biodegradable in water.		
BCF - Fish [1]       70 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)         Bioaccumulative potential       Low potential for bioaccumulation (BCF < 500).	12.3. Bioaccumulative potential			
Bioaccumulative potential       Low potential for bioaccumulation (BCF < 500).	Silver (7440-22-4)			
Reactive diluent       3.162 l/kg (BCFBAF v3.00, Calculated value, Fresh weight)         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.         Reactive Diluent	BCF - Fish [1]	70 (30 day(s), Cyprinus carpio, Fresh water, Experimental value, Fresh weight)		
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.         Reactive Diluent       Not bioaccumulative.         Partition coefficient n-octanol/water (Log Pow)       2.16 (Estimated value)         Bioaccumulative potential       Low potential for bioaccumulation (Log Kow < 4).	Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).		
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.         Reactive Diluent         Partition coefficient n-octanol/water (Log Pow)       2.16 (Estimated value)         Bioaccumulative potential       Low potential for bioaccumulation (Log Kow < 4).	Reactive diluent			
Method, 25 °C)           Bioaccumulative potential         Not bioaccumulative.           Reactive Diluent         Image: Comparison of the substance available.           Partition coefficient n-octanol/water (Log Pow)         2.16 (Estimated value)           Bioaccumulative potential         Low potential for bioaccumulation (Log Kow < 4).	BCF - Other aquatic organisms [1]	3.162 l/kg (BCFBAF v3.00, Calculated value, Fresh weight)		
Reactive Diluent         Partition coefficient n-octanol/water (Log Pow)       2.16 (Estimated value)         Bioaccumulative potential       Low potential for bioaccumulation (Log Kow < 4).	Partition coefficient n-octanol/water (Log Pow)			
Partition coefficient n-octanol/water (Log Pow)       2.16 (Estimated value)         Bioaccumulative potential       Low potential for bioaccumulation (Log Kow < 4).	Bioaccumulative potential	Not bioaccumulative.		
Bioaccumulative potential       Low potential for bioaccumulation (Log Kow < 4).	Reactive Diluent			
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).	Partition coefficient n-octanol/water (Log Pow)	2.16 (Estimated value)		
Partition coefficient n-octanol/water (Log Pow)       3.242 (Literature)         Bioaccumulative potential       Low potential for bioaccumulation (Log Kow < 4).	Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).		
Bioaccumulative potential     Low potential for bioaccumulation (Log Kow < 4).       12.4. Mobility in soil     Silver (7440-22-4)       Silver (7440-22-4)     No (test)data on mobility of the substance available.	Bisphenol A diglycidyl ether resin (25085-99-8)			
12.4. Mobility in soil       Silver (7440-22-4)       Ecology - soil     No (test)data on mobility of the substance available.	Partition coefficient n-octanol/water (Log Pow)	3.242 (Literature)		
Silver (7440-22-4)         Ecology - soil         No (test)data on mobility of the substance available.	Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).		
Ecology - soil No (test)data on mobility of the substance available.	12.4. Mobility in soil			
	Silver (7440-22-4)			
Reactive diluent	Ecology - soil	No (test)data on mobility of the substance available.		
	Reactive diluent			
Surface tension No data available (test not performed)	Surface tension	No data available (test not performed)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc, SRC PCKOCWIN v2.0, Calculated value) (Log Koc)		0.544 – 0.811 (log Koc, SRC PCKOCWIN v2.0, Calculated value)		

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Reactive diluent		
Ecology - soil	Highly mobile in soil.	
Bisphenol A diglycidyl ether resin (25085-99-8)		
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.

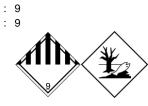
SECTION 14: Transport information	
In accordance with DOT / TDG / IMDG / IATA	
14.1. UN number	
DOT NA No UN-No. (TDG) UN-No. (IMDG) UN-No. (IATA)	: UN3082 : UN3082 : 3082 : 3082
14.2. UN proper shipping name	
Proper Shipping Name (DOT) Proper Shipping Name (TDG)	<ul> <li>Environmentally hazardous substances, liquid, n.o.s. (Silver, Bisphenol A Diglycidyl Ether Resin)</li> <li>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver, Bisphenol A Diglycidyl Ether Resin)</li> </ul>
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver, Bisphenol A Diglycidyl Ether Resin)

# Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s. (Silver, Bisphenol A Diglycidyl Ether Resin)

# 14.3. Transport hazard class(es)

# DOT

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



**TDG** Transport hazard class(es) (TDG) Hazard labels (TDG)



: 9

### IMDG

Transport hazard class(es) (IMDG)

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Hazard labels (IMDG)	
IATA Transport hazard class(es) (IATA)	: 9
Hazard labels (IATA)	
14.4. Packing group	
Packing group (DOT) Packing group (TDG) Packing group (IMDG) Packing group (IATA)	: III : III : III : III
14.5. Environmental hazards	
Dangerous for the environment Marine pollutant	: Yes : Yes
Other information	: No supplementary information available.
14.6. Special precautions for user	
DOT UN-No.(DOT)	: UN3082

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DOT Special Provisions (49 CFR 172.102)	<ul> <li>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.</li> </ul>
	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	: No Limit
CFR 173.27)	
DOT Quantity Limitations Cargo aircraft only (49	: No Limit
CFR 175.75)	
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)	· 1N3082

UN-No. (TDG)

: UN3082

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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).
	<ul><li>(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</li></ul>
	domestic transport or an international convention for international transport prohibits the
	disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S;
	(a) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S;
	(c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S;
	(d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or
	<ul><li>(e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S.</li><li>(3) Despite subsection (1), the technical name for the following dangerous goods is not required</li></ul>
	to be shown on a small means of containment:
	(a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or
	(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. (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
Explosive Limit and Limited Quantity Index	endanger public safety. : 5 L
Excepted quantities (TDG)	: 5L : E1
Emergency Response Guide (ERG) Number	: 171
IMDG Special provision (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG) Packing provisions (IMDG)	: LP01, P001 : PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	
EmS-No. (Fire) EmS-No. (Spillage)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE : S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A
ΙΑΤΑ	
PCA Excepted quantities (IATA)	: E1 · V964
PCA Limited quantities (IATA) PCA limited quantity max net quantity (IATA)	: Y964 : 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) ERG code (IATA)

:	A97, A158, A197, A21
:	9L

5

# 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 rederal regulations			
All components of this product are present and listed as (TSCA) inventory	Active on the United States Environme	ntal Protection Agency Toxic Substances Control Act	
Chemical(s) subject to the reporting requirements of Se and 40 CFR Part 372.	ction 313 or Title III of the Superfund An	nendments and Reauthorization Act (SARA) of 1986	
Silver	CAS-No. 7440-22-4 ≥ 60%		
Silver (7440-22-4)			
CERCLA RQ	1000 lb		
45.0 Internetional regulations			
15.2. International regulations			
CANADA			
Silver (7440-22-4)			
Listed on the Canadian DSL (Domestic Substances Lis	t)		
Substituted imidazole			
Listed on the Canadian DSL (Domestic Substances List	i)		
Reactive diluent			
Listed on the Canadian DSL (Domestic Substances List	t)		
Reactive Diluent			
	A		
Listed on the Canadian DSL (Domestic Substances List	.)		
Bisphenol A diglycidyl ether resin (25085-99-8	)		
Listed on the Canadian DSL (Domestic Substances List	t)		
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)

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

### **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**

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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
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H341	Suspected of causing genetic defects
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.