EPO-TEK® H27D PMF SYRINGE

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 10/11/2024 Revision date: 7/30/2026 Supersedes: 5/2/2025 Version: 3.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : EPO-TEK® H27D PMF SYRINGE

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

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

1.4. Supplier's details

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

1.5. Emergency phone number

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

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 1	H318	Causes serious eye damage.
Respiratory sensitization, Category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, Category 1	H317	May cause an allergic skin reaction.
Germ cell mutagenicity, Category 2	H341	Suspected of causing genetic defects.
Reproductive toxicity, Category 1B	H360	May damage fertility or the unborn child.
Specific target organ toxicity — Single exposure, Category 1	H370	Causes damage to organs.
Specific target organ toxicity — Repeated exposure, Category 2	H373	May cause damage to organs through prolonged or repeated exposure.
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. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US)	:	H315 - Causes skin irritation H317 - May cause an allergic skin reaction H318 - Causes serious eye damage H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled H341 - Suspected of causing genetic defects. H360 - May damage fertility or the unborn child H370 - Causes damage to organs. H373 - May cause damage to organs through prolonged or repeated exposure H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects
Precautionary statements (GHS US)	:	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P260 - Do not breathe 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. 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, and hearing protection. P284 - Wear respiratory protection. P302+P352 - If on skin: Wash with plenty of water. 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. P308+P311 - If exposed or concerned: Call a poison center or doctor. P308+P313 - If exposed or concerned: Get medical advice/attention. P310 - Immediately call a poison center or doctor. P314 - Get medical advice or attention if you feel unwell. P321 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice or attention. P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor. P362+P364 - Take off contaminated clothing and wash it before reuse. P391 - Collect spillage. P405 - Store locked up. P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

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

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
silver powder: [particle diameter > 100 nm < 1 mm]	CAS-No.: 7440-22-4	65 - 85*	Eye Irrit. 2B, H320 Skin Sens. 1, H317 Repr. 1B, H360 STOT SE 1, H370 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Bisphenol A diglycidyl ether resin	CAS-No.: 25085-99-8	15 - 40*	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Substituted anhydride	CAS-No.: 34090-76-1	5 - 10*	Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317
Substituted Anhydride	CAS-No.: 85-43-8	0.5 - 5*	Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Phthalic anhydride	CAS-No.: 85-44-9	0.5 - 5*	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335
Reactive Diluent	CAS-No.: 2210-79-9	1 - 5*	Skin Irrit. 2, H315 Skin Sens. 1, H317 Muta. 2, H341 Aquatic Chronic 2, H411

Comments : 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

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

SECTION 4 First aid measures

4.1. Description of necessary 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. If experiencing respiratory symptoms: Call a poison center or a doctor.

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 : Call a poison center/doctor/physician if you feel unwell.

Personal protection for first-aid responders. : First-aiders should consider self-protection and use the recommended personal protective equipment (see section 8).

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : None under normal conditions.
Chronic symptoms : May damage fertility or the unborn child.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
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

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapors/spray.

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".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

Environmental precautions : Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.2. Methods and materials for containment and cleaning up

For containment : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13.

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. 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.

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Keep stored at -40°C.

Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

Phthalic anhydride (85-44-9)	
USA - ACGIH® - Threshold Limit Values	
ACGIH® TLV® TWA	0.002 mg/m³ (Inhalable fraction and vapor)
ACGIH® TLV® STEL	0.005 mg/m³ (Inhalable fraction and vapor)

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, such as personal protective equipment

Personal protective equipment:

Wear recommended 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 inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	:	Liquid
Color	:	Silver
Odor	:	Mild odour
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Flammability (solid, gas)	:	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
Explosion limits	:	No data available
Particle characteristics	:	No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11 Toxicological information

11.1. Information on toxicological effects

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

Substituted anhydride (34090-76-1)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Read-across, Oral)
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Read-across, Dermal)

Substituted Anhydride (85-43-8)	
LD50 oral rat	≈ 3200 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 oral	5410 mg/kg
LD50 dermal rat	> 2000 mg/kg body weight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	3000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 0.294 mg/l
ATE US (oral)	5410 mg/kg body weight
ATE US (dermal)	3000 mg/kg body weight

Phthalic anhydride (85-44-9)	
LD50 oral rat	1530 mg/kg (Rat, Male, Experimental value, Oral, 14 day(s))
LD50 oral	800 mg/kg
LD50 dermal rabbit	> 3160 mg/kg (Rabbit, Experimental value, Dermal, 14 day(s))
LD50 dermal	10000 mg/kg
LC50 Inhalation - Rat	> 2.14 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
LC50 Inhalation - Rat (Dust/Mist)	> 2.14 mg/l Source: ECHA
ATE US (oral)	800 mg/kg body weight
ATE US (dermal)	10000 mg/kg body weight

Reactive Diluent (2210-79-9)	
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 oral	5000 mg/kg
LD50 dermal rat	> 2000 mg/kg (Rat, Dermal)
LD50 dermal	2500 mg/kg
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

Skin corrosion/irritation : Causes skin irritation.

Substituted anhydride (34090-76-1)	
pH	2.7 (aqueous suspension, Calculated, 0.95 %, 20 °C)

Substituted Anhydride (85-43-8)	
pH	2.1 (1 %)

Phthalic anhydride (85-44-9)	
pH	2 (0.6 %)

Serious eye damage/irritation : Causes serious eye damage.

Substituted anhydride (34090-76-1)	
pH	2.7 (aqueous suspension, Calculated, 0.95 %, 20 °C)

Substituted Anhydride (85-43-8)	
pH	2.1 (1 %)

Phthalic anhydride (85-44-9)	
pH	2 (0.6 %)

Respiratory or skin sensitization : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Germ cell mutagenicity : Suspected of causing genetic defects.

Carcinogenicity : Not classified

Phthalic anhydride (85-44-9)	
NOAEL (chronic,oral,animal/male,2 years)	3570 mg/kg body weight Animal: mouse, Animal sex: male, Remarks on results: other:Effect type: carcinogenicity (migrated information)
NOAEL (chronic,oral,animal/female,2 years)	1785 mg/kg body weight Animal: mouse, Animal sex: female, Remarks on results: other:Effect type: carcinogenicity (migrated information)

Reproductive toxicity : May damage fertility or the unborn child.

Phthalic anhydride (85-44-9)	
NOAEL (animal/male, F0/P)	3570 mg/kg body weight Animal: mouse, Animal sex: male, Remarks on results: other:Generation: all major orans incl. reproductive organs were examined (migrated information)
NOAEL (animal/female, F0/P)	1785 mg/kg body weight Animal: mouse, Animal sex: female, Remarks on results: other:Generation: all major orans incl. reproductive organs were examined (migrated information)

STOT-single exposure : Causes damage to organs.

Phthalic anhydride (85-44-9)	
STOT-single exposure	May cause respiratory irritation.

silver powder: [particle diameter > 100 nm < 1 mm] (7440-22-4)	
STOT-single exposure	Causes damage to organs.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Substituted anhydride (34090-76-1)	
NOAEL (oral,rat,90 days)	100 mg/kg body weight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Substituted Anhydride (85-43-8)	
NOAEL (oral,rat,90 days)	600 mg/kg body weight Animal: rat, Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral)), Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

Phthalic anhydride (85-44-9)	
LOAEL (oral,rat,90 days)	2500 mg/kg body weight Animal: rat, Animal sex: male

silver powder: [particle diameter > 100 nm < 1 mm] (7440-22-4)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Substituted anhydride (34090-76-1)	
Viscosity, kinematic	77.5 mm²/s (20 °C, Calculated)
Phthalic anhydride (85-44-9)	
Viscosity, kinematic	Not applicable (solid)
Reactive Diluent (2210-79-9)	
Viscosity, kinematic	> 4.634 mm²/s

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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

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

Symptoms/effects after ingestion : None under normal conditions.

Chronic symptoms : May damage fertility or the unborn child.

SECTION 12 Ecological information

12.1. Ecotoxicity

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

Hazardous to the aquatic environment, short–term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long–term (chronic) : Very toxic to aquatic life with long lasting effects.

Substituted anhydride (34090-76-1)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oryzias latipes, Flow-through system, Fresh water, Read-across, GLP)
EC50 - Crustacea [1]	130 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Read-across, GLP)
EC50 72h - Algae [1]	64 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	68 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
ErC50 algae	79 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Static system, Fresh water, Read-across, GLP)
LOEC (chronic)	40 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	20 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	100 mg/l Test organisms (species): Oryzias latipes Duration: '14 d'

Substituted Anhydride (85-43-8)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	65.3 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	61.4 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Phthalic anhydride (85-44-9)	
LC50 - Fish [1]	560 mg/l (OECD 210: Fish, Early-Life Stage Toxicity Test, 7 day(s), Danio rerio, Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	> 640 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	68 mg/l Source: ECHA
NOEC (chronic)	16 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	10 mg/l
NOEC chronic crustacea	16 mg/l
NOEC chronic algae	32 mg/l

Reactive Diluent (2210-79-9)	
LC50 - Fish [1]	1 – 10 mg/l (Pisces)
EC50 - Crustacea [1]	1 – 10 mg/l (Invertebrata)
EC50 72h - Algae [1]	≈ 5.1 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

EPO-TEK® H27D PMF SYRINGE	
Persistence and degradability	Not rapidly degradable

Substituted anhydride (34090-76-1)	
Persistence and degradability	Biodegradability in soil: no data available, Not readily biodegradable in water.

Substituted Anhydride (85-43-8)	
Persistence and degradability	Not readily biodegradable in water.

Phthalic anhydride (85-44-9)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.26 g O_2 /g substance
ThOD	1.51 g O_2 /g substance

silver powder: [particle diameter > 100 nm < 1 mm] (7440-22-4)	
Persistence and degradability	Not rapidly degradable

Reactive Diluent (2210-79-9)	
Persistence and degradability	Biodegradability in soil: no data available, Not readily biodegradable in water.

Bisphenol A diglycidyl ether resin (25085-99-8)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Substituted anhydride (34090-76-1)	
BCF - Fish [1]	< 2.4 (OECD 305: Bioconcentration: Flow-Through Fish Test, 6 week(s), Cyprinus carpio, Read-across)
Partition coefficient n-octanol/water (Log Pow)	1.88 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 40 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Substituted Anhydride (85-43-8)	
Partition coefficient n-octanol/water (Log Pow)	1.96 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Phthalic anhydride (85-44-9)	
Partition coefficient n-octanol/water (Log Pow)	1.43 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Reactive Diluent (2210-79-9)	
Partition coefficient n-octanol/water (Log Pow)	2.16 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Substituted anhydride (34090-76-1)	
Surface tension	44 mN/m (23 °C)
Ecology - soil	Adsorbs into the soil.

Phthalic anhydride (85-44-9)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.3 – 1.49 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Ozone : Not classified

Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.

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

Sewage disposal recommendations : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Disposal must be done according to official regulations.

Additional information : Do not re-use empty containers.

Ecological waste information : The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
UN3082	UN3082	3082	3082
14.2. Proper Shipping Name			
Environmentally hazardous substances, liquid, n.o.s. (Silver, Bisphenol A Diglycidyl Ether Resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver, Bisphenol A Diglycidyl Ether Resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Silver, Bisphenol A Diglycidyl Ether Resin)	Environmentally hazardous substance, liquid, n.o.s. (Silver, Bisphenol A Diglycidyl Ether Resin)
14.3. Transport hazard class(es)			
9	9	9	9
			
14.4. Packing group			
III	III	III	III
14.5. Environmental hazards			
Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

UN-No. (DOT) : UN3082

DOT Special Provisions (49 CFR 172.102)	:	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

TDG Special Provisions	:	16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the danger or dangers 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). 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). (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: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) 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 (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required 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 offered for transport, handled or transported as UN3077 if there is no visible liquid when the dangerous goods are loaded into a means of containment and during transport. (2) These Regulations, except for Parts 1 and 2, do not apply to the offering for transport, handling or transport 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 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

IMDG

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

IATA

Special provision (IATA)	:	A97, A158, A197, A215
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

ERG code (IATA) : 9L

SECTION 15 Regulatory information

15.1. 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, except for:		
silver powder: [particle diameter > 100 nm < 1 mm]	CAS-No. 7440-22-4	65 - 85*%

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.		
Phthalic anhydride	CAS-No. 85-44-9	0.5 - 5*%

Phthalic anhydride (85-44-9)	
Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb

15.2. International regulations

CANADA

Substituted anhydride (34090-76-1)

Listed on the Canadian DSL (Domestic Substances List)

Substituted Anhydride (85-43-8)

Listed on the Canadian DSL (Domestic Substances List)

Phthalic anhydride (85-44-9)

Listed on the Canadian DSL (Domestic Substances List)

Reactive Diluent (2210-79-9)

Listed on the Canadian DSL (Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Substituted Anhydride (85-43-8)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Phthalic anhydride (85-44-9)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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

15.3. 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
Substituted Anhydride(85-43-8)	U.S. - New Jersey - Right to Know Hazardous Substance List
Phthalic anhydride(85-44-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Revision date : 7/30/2026

Issue date : 10/11/2024

Full text of hazard classes and H-statements	
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
H320	Causes eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H341	Suspected of causing genetic defects.
H360	May damage fertility or the unborn child
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure
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
H412	Harmful to aquatic life with long lasting effects

Safety Data Sheet (SDS), USA

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