

Safety Data Sheet acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

* 1 Identification

- **Product name:** EpoxySet Resin - Part A
- **Part number:**
145-20000
145-20005, 145-20015
- **Application of the substance / the mixture** Epoxy resin
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Allied High Tech Products Inc.
16207 Carmenita Road
USA-Cerritos, CA, 90703
USA
info@alliedhightech.com
- **Information department:** Product safety department
- **Emergency telephone number:**
During normal opening times: +1 (310) 635-2466
Chemtrec: +1 (202) 483-7616

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Germ Cell Mutagenicity 2
Carcinogenicity 2

H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.



GHS09 Environment

Aquatic Chronic 2

H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irritation 2
Eye Irritation 2A
Sensitization - Skin 1

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure 3

H335 May cause respiratory irritation.

Flammable Liquids 4

H227 Combustible liquid.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Resin - Part A

(Contd. of page 1)

· Hazard pictograms

GHS07 GHS08 GHS09

· Signal word Warning**· Hazard-determining components of labeling:**

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)
butyl glycidyl ether

· Hazard statements

Combustible liquid.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Suspected of causing cancer.
May cause respiratory irritation.
Toxic to aquatic life with long lasting effects.

· Precautionary statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from flames and hot surfaces. – No smoking.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
Call a poison center/doctor if you feel unwell.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use CO₂, powder or water spray to extinguish.
Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

· Chemical characterization: Mixtures

· Description: Mixture of the substances listed below with nonhazardous additions.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Resin - Part A

(Contd. of page 2)

· Hazardous components and components with occupational exposure limits:		
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) ⚠ Aquatic Chronic 2, H411; ⚠ Skin Irritation 2, H315; Eye Irritation 2A, H319; Sensitization - Skin 1, H317	70-80%
2426-08-6	butyl glycidyl ether ⚠ Flammable Liquids 3, H226; ⚠ Germ Cell Mutagenicity 2, H341; Carcinogenicity 2, H351; ⚠ Acute Toxicity - Oral 4, H302; Acute Toxicity - Inhalation 4, H332; Sensitization - Skin 1, H317; Specific Target Organ Toxicity - Single Exposure 3, H335; Aquatic Chronic 3, H412	20-<25%

· **Additional information:** The specific chemical identity and/or exact percentage of the composition has been withheld as a trade secret.

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
Breathing difficulty
Dizziness
Coughing
Allergic reactions
Nausea
Dermatitis
Eye irritation
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from ignition sources
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Resin - Part A

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Protect from heat and direct sunlight.
Ensure proper ventilation/exhaustion at workplaces.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Protect from sunlight.
Store in a dry place. Store in a closed container.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store receptacle in a well ventilated area.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No additional data. See 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

2426-08-6 butyl glycidyl ether	
PEL	Long-term value: 270 mg/m ³ , 50 ppm
REL	Ceiling limit value: 30 mg/m ³ , 5.6 ppm *15-min
TLV	Long-term value: 3 ppm Skin; DSEN

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Use suitable respiratory protective device when high concentrations are present.
- **Protection of hands:**
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Resin - Part A

(Contd. of page 4)

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	Liquid
Color:	Light yellow
· Odor:	Characteristic
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	73.3 °C (163.9 °F) (Pensky-Martens Closed Cup)
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 25 °C (77 °F):	4 hPa (3 mm Hg)
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	4.5 (Air = 1)
· Specific gravity:	1.13
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC content:	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- Reactivity No further relevant information available.
- Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Resin - Part A

(Contd. of page 5)

- **Possibility of hazardous reactions** Reacts with considerable heat release with some curing agents.
- **Conditions to avoid**
Do not mix with alkalis.
Keep away from oxidising agents and acidic substances.
Keep away from heat.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide
- **Additional information:** Hazardous decomposition products may form during combustion.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

Oral	LD50	30,000 mg/kg (rat)
Dermal	LD50	23,000 mg/kg (rabbit)

2426-08-6 butyl glycidyl ether

Oral	LD50	2,050 mg/kg (rat)
Dermal	LD50	2,520 mg/kg (rabbit)
Inhalative	LC50/4 h	11 mg/l (ATE)

- **Primary chemical irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

2426-08-6	butyl glycidyl ether	2B
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- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

EC50 (48 h)	2.1 mg/l (water flea)
LC50 (96 h)	1.3 mg/l (daphnia)

25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)

EC50 (48 h)	1.8 mg/l (water flea)
LC50 (96 h)	2 mg/l (rainbow trout)
ErC50(72h)	11 mg/l (fresh water algae)
IC50(18h)	42.6 mg/l (bacteria)

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Resin - Part A

(Contd. of page 6)

- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Contact waste processors for recycling information.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT, ADN, IMDG, IATA 	not regulated
<ul style="list-style-type: none"> · UN proper shipping name · DOT, ADN, IMDG, IATA 	not regulated
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT, IATA · Class · Label · ADN/R Class: 	not regulated - not regulated
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	not regulated
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	Yes
<ul style="list-style-type: none"> · Special precautions for user 	Not applicable.
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · UN "Model Regulation": 	not regulated

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Sara**

<ul style="list-style-type: none"> · Section 355 (extremely hazardous substances): 	None of the ingredients is listed.
<ul style="list-style-type: none"> · Section 313 (Specific toxic chemical listings): 	None of the ingredients is listed.
<ul style="list-style-type: none"> · TSCA (Toxic Substances Control Act): 	All components have the value ACTIVE.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Resin - Part A

(Contd. of page 7)

· Hazardous Air Pollutants
None of the ingredients is listed.
· Proposition 65
· Chemicals known to cause cancer:
2426-08-6 butyl glycidyl ether
· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.
· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.
· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, it does not describe a guarantee of product properties and does not establish a contractual legal relationship.

- **Department issuing SDS:** Technical Services
- **Contact:** Pablo Mendoza
- **Last revision / supersedes version:** 06/01/2024 / 3.0
- **Supersedes date:** 06/01/2022
- **Abbreviations and acronyms:**
 - ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - VOC: Volatile Organic Compounds (USA, EU)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - OSHA: Occupational Safety & Health
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - Flammable Liquids 3: Flammable liquids – Category 3
 - Flammable Liquids 4: Flammable liquids – Category 4
 - Acute Toxicity - Oral 4: Acute toxicity – Category 4
 - Skin Irritation 2: Skin corrosion/irritation – Category 2
 - Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
 - Sensitization - Skin 1: Skin sensitisation – Category 1
 - Germ Cell Mutagenicity 2: Germ cell mutagenicity – Category 2
 - Carcinogenicity 2: Carcinogenicity – Category 2
 - Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3
 - Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
 - Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- *** Data compared to the previous version altered.**

Safety Data Sheet acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

* 1 Identification

- **Product name:** EpoxySet Hardener - Part B
- **Part number:**
145-20000
145-20010, 145-20020
- **CAS Number:**
112-24-3
- **EC number:**
203-950-6
- **Index number:**
612-059-00-5
- **Application of the substance / the mixture** Epoxy curing agent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Allied High Tech Products Inc.
16207 Carmenita Road
USA-Cerritos, CA, 90703
USA
info@alliedhightech.com
- **Information department:** Product safety department
- **Emergency telephone number:**
During normal opening times: +1 (310) 635-2466
Chemtrec: +1 (202) 483-7616

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Skin Corrosion 1B H314 Causes severe skin burns and eye damage.
Eye Damage 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity - Dermal 4 H312 Harmful in contact with skin.
Sensitization - Skin 1 H317 May cause an allergic skin reaction.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Hardener - Part B

(Contd. of page 1)

· Hazard pictograms

GHS05 GHS07

· Signal word Danger**· Hazard-determining components of labeling:**

triethylenetetramine

· Hazard statements

Harmful in contact with skin.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

· Precautionary statements

Do not breathe dusts or mists.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

· Chemical characterization: Substances**· CAS No. Description**

112-24-3 triethylenetetramine

· Identification number(s)**· EC number:** 203-950-6**· Index number:** 612-059-00-5

4 First-aid measures

· Description of first aid measures**· General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact: Immediately wash with water and soap and rinse thoroughly.**· After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.**· After swallowing:** Drink copious amounts of water and provide fresh air. Immediately call a doctor.**· Information for doctor:****· Most important symptoms and effects, both acute and delayed**

Thermal burns

Diarrhea

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Hardener - Part B

(Contd. of page 2)

Redness
Swelling
Gastric or intestinal disorders
Allergic reactions
Dermatitis
Eye irritation

· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Carbon dioxide
 - Water spray
 - Foam
- Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Wear protective equipment. Keep unprotected persons away.
 - Keep away from ignition sources
- **Environmental precautions:**
 - Do not allow to enter sewers/ surface or ground water.
 - Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Use neutralizing agent.
 - Dispose contaminated material as waste according to section 13.
 - Ensure adequate ventilation.
- **Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - Ensure proper ventilation/exhaustion at workplaces.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Store in a cool location.
 - No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Store receptacle in a well ventilated area.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No additional data. See 7.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Hardener - Part B

(Contd. of page 3)

· **Control parameters**

· Components with limit values that require monitoring at the workplace:	
112-24-3 triethylenetetramine	
WEEL	Long-term value: 6 mg/m ³ , 1 ppm Skin

· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

· **Breathing equipment:** Use suitable respiratory protective device when high concentrations are present.· **Protection of hands:**

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Eye protection:**

Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties	
· General Information	
· Appearance:	
· Form:	Liquid
· Color:	Clear
· Odor:	Amine-like
· Odor threshold:	Not determined.
· pH-value:	10-11
· Change in condition	
· Melting point/Melting range:	12 °C (53.6 °F)
· Boiling point/Boiling range:	~278 °C (~532.4 °F)
· Flash point:	135 °C (275 °F) (Pensky-Martens Closed Cup)
· Flammability (solid, gaseous):	Not applicable.
· Auto igniting:	335 °C (635 °F)
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Hardener - Part B

(Contd. of page 4)

· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	0.01 hPa (0 mm Hg)
· Density at 20 °C (68 °F):	0.982 g/cm ³ (8.195 lbs/gal)
· Relative density	Not determined.
· Vapor density	5 (Air = 1)
· Specific gravity:	0.98
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic at 20 °C (68 °F):	30 mPas
Kinematic:	Not determined.
VOC content:	0.00 %
Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid**
Keep away from oxidising agents and acidic substances.
Keep away from heat.
Keep away from alkaline solutions.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
Nitrogen oxides
Carbon monoxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
112-24-3 triethylenetetramine		
Oral	LD50	2,500 mg/kg (rat)
Dermal	LD50	805 mg/kg (rabbit)

- **Primary chemical irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Hardener - Part B

(Contd. of page 5)

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)
Substance is not listed.
· NTP (National Toxicology Program)
Substance is not listed.
· OSHA-Ca (Occupational Safety & Health Administration)
Substance is not listed.

12 Ecological information

· Toxicity

· Aquatic toxicity:
EC50 (96 h) 3.7 mg/l (senastrum capricornutum)
EC50 (48 h) (static) 33.9 mg/l (daphnia)

· **Persistence and degradability** No further relevant information available.· **Behavior in environmental systems:**· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Ecotoxicological effects:**· **Remark:** Harmful to fish· **Additional ecological information:**· **General notes:**

Water hazard class 2 (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**· **Recommendation:** Contact waste processors for recycling information.· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	UN2259
· UN proper shipping name	
· DOT	Triethylenetetramine
· IMDG, IATA	TRIETHYLENETETRAMINE

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS



Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Hardener - Part B

(Contd. of page 6)

<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	
	
<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances</p> <p>8</p>
<ul style="list-style-type: none"> · IMDG, IATA 	
	
<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances</p> <p>8</p>
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	<p>II</p>
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: 	<p>No</p>
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Stowage Code · Segregation Code 	<p>Warning: Corrosive substances</p> <p>80</p> <p>F-A,S-B</p> <p>Alkalis</p> <p>B</p> <p>SW2 Clear of living quarters.</p> <p>SG35 Stow "separated from" acids.</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations · Limited quantities (LQ) · Transport category · Tunnel restriction code 	<p>On passenger aircraft/rail: 1 L</p> <p>On cargo aircraft only: 30 L</p> <p>1L</p> <p>2</p> <p>E</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 2259 TRIETHYLENETETRAMINE, 8, II</p>

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Sara**

- **Section 355 (extremely hazardous substances):**

Substance is not listed.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/02/2024

Version 4.0

Last revision 06/01/2024

Product name: EpoxySet Hardener - Part B

(Contd. of page 7)

· Section 313 (Specific toxic chemical listings):	Substance is not listed.
· TSCA (Toxic Substances Control Act):	ACTIVE
· Hazardous Air Pollutants	Substance is not listed.
· Proposition 65	
· Chemicals known to cause cancer:	Substance is not listed.
· Chemicals known to cause reproductive toxicity for females:	Substance is not listed.
· Chemicals known to cause reproductive toxicity for males:	Substance is not listed.
· Chemicals known to cause developmental toxicity:	Substance is not listed.
· Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, it does not describe a guarantee of product properties and does not establish a contractual legal relationship.

- **Department issuing SDS:** Technical Services
- **Contact:** Pablo Mendoza
- **Last revision / supersedes version:** 06/01/2024 / 3.0
- **Supersedes date:** 06/01/2022
- **Abbreviations and acronyms:**
 - IMDG: International Maritime Code for Dangerous Goods
 - DOT: US Department of Transportation
 - IATA: International Air Transport Association
 - EINECS: European Inventory of Existing Commercial Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - VOC: Volatile Organic Compounds (USA, EU)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - OSHA: Occupational Safety & Health
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - Acute Toxicity - Dermal 4: Acute toxicity – Category 4
 - Skin Corrosion 1B: Skin corrosion/irritation – Category 1B
 - Eye Damage 1: Serious eye damage/eye irritation – Category 1
 - Sensitization - Skin 1: Skin sensitisation – Category 1
 - Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- *** Data compared to the previous version altered.**