

Trade name: EPX50LT-OVERLAY Part A

SECTION 1: Identification

Product identifier used on the label:

Product Name: EPX50LT-OVERLAY Part A

Other means of identification:

Product Code Number: Not available

Recommended use of the chemical and restrictions on use:

Recommended use: Epoxy Bonding Agent.

Recommended restrictions: Uses other than as recommended above

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Company Name: E-Chem, LLC
Company Address: 4102 El Rey Rd. SE
Albuquerque, NM 87105
Company Telephone: Phone: 505.217.2121
Fax: 505.217.3721
Company Contact Email: Email: mail@e-chem.net
Web: www.e-chem.net
Emergency phone number: Chemtrec at 1-800-424-9300 24 Hours
Outside the U.S., call Chemtrec collect at 703-527-3887

SECTION 2: Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200:

Physical hazards

None known

Health hazards

Skin corrosion/irritation, category 2

Skin sensitization, category 1

Serious eye irritation, category 2A

Germ cell mutagenicity, category 2

Environmental hazards

Not adopted under OSHA paragraph (d) of §1910.1200

GHS Signal word: DANGER

GHS Hazard statement(s): Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
Suspected of causing genetic defects

GHS Hazard symbol(s):**GHS Precautionary statement(s):****Prevention:**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Avoid breathing dust/fume/gas/mist/ vapors/spray.
- Wash thoroughly after handling.
- Contaminated work clothing must not be allowed out of the workplace
- Wear protective gloves/protective clothing/eye protection/face protection.

Response:

- If on skin: Wash with plenty of water
- 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.
- Specific treatment (see sections 4 to 8 on this SDS and any further information on the label).
- If skin irritation or rash occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.

Storage:

- Store locked up.

Disposal:

- Dispose of contents/container to an approved disposal site in accordance with local/regional/national/ international regulations

Hazard(s) not otherwise classified (HNOC):

None known.

Percentage of ingredient(s) of unknown acute toxicity:

97% of the mixture consists of ingredients of unknown acute toxicity (inhalation).

SECTION 3: Composition/information on ingredients**Mixture:**

Chemical name	CAS#	Concentration (weight %)
Bisphenol A Epoxy Resin	25068-38-6	70 - 100%
1,4-Butanediol Diglycidyl Ether	2425-79-8	≤ 10%
2-Ethylhexyl Glycidyl ether	2461-15-6	≤ 10%
O-Cresyl Glycidyl Ether	2210-79-9	≤ 10%

SECTION 4: First-aid measures

Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion:

Inhalation: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Seek medical advice.

Skin contact: Remove contaminated clothing. Wash with water and soap and rinse thoroughly. Seek medical advice if irritation or pain develops.

Eye contact: In case of eye contact, rinse with plenty of water for at least 15 minutes. If irritation from exposure to vapor develops, move to fresh air. Get medical attention if symptoms develop.

Ingestion: Do NOT induce vomiting. Get medical attention immediately. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Suspected of causing genetic defects.

Indication of immediate medical attention and special treatment needed:

If any symptoms are observed, contact a physician and give them this SDS sheet. Provide general supportive measures and treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable (and unsuitable) extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Not expected to be flammable. Use extinguishing media suitable for the surrounding area.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Not expected to be flammable. In the case of a fire, consider the surrounding area.

Hazardous combustion products may include the following substances: Carbon monoxide, Carbon dioxide (CO₂).

Special protective equipment and precautions for fire-fighters:

Cool containers with water until well after fire is out. Do not approach the tank surrounded by fire until it is extinguished.

Wear self-contained breathing apparatus and protective clothing. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Keep out of drains, surface waters and soil against pollution.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary personnel away from and upwind of spill/leak. Wear appropriate personal protective equipment (refer to Section 8 Exposure controls/ personal protection) and avoid inhalation or contact with eyes and skin. Prevent runoff and contact with waterways, drains or sewers.

Methods and materials for containment and cleaning up:

Large Spills: Stop the flow of material, if safe to do so. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Small Spills: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid breathing mist or vapor. Avoid contact with skin or eyes. Avoid prolonged exposure.

Wear appropriate personal protective equipment. Wash hands thoroughly after handling.

Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibles:

Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

Substance	US OSHA PELs		US ACGIH TLVs		NIOSH OELs	
	TWA (8 hour)	STEL (15 min)	TWA (8 hour)	STEL (15 min)	IDLH	TWA (8hr)
Bisphenol A Epoxy Resin	No data available	No data available	No data available	No data available	No data available	No data available
1,4-Butanediol Diglycidyl Ether	No data available	No data available	No data available	No data available	No data available	No data available
2-Ethylhexyl Glycidyl ether	No data available	No data available	No data available	No data available	No data available	No data available
O-Cresyl Glycidyl Ether	No data available	No data available	No data available	No data available	No data available	No data available

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

If exposure limits have not been established, maintain airborne levels to an acceptable level.

Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Concentrations should be monitored hazardous substances in the workplace in accordance with recognized test methods. Mode, method, type and frequency of testing and measurement of harmful factors in the working environment should meet the requirements of local/regional/national laws.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear safety glasses with side shields (or goggles). Use equipment for eye protection tested and approved under NIOSH standards.

Skin and hand protection: Wear appropriate chemical resistant 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 cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. The selected protective gloves have to satisfy the specifications of ASTM F739.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a chemical respirator with organic vapor cartridge and full facepiece. Use respirators and components tested and approved under appropriate government standards such as NIOSH).

General hygiene considerations: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Wash hands after use.

SECTION 9: Physical and chemical properties

Appearance (physical state, color, etc.):

Physical state:	Liquid
Color:	Clear
Odor:	Characteristic
Odor threshold:	Not determined
pH:	Not applicable
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not applicable
Flash point:	Not applicable
Evaporation rate:	Not applicable
Flammability (solid, gas):	Not expected to be flammable
Upper/lower flammability or explosive limits	
Flammability limit – lower (%):	Not applicable
Flammability limit – upper (%):	Not applicable
Explosive limit – lower (%):	Not applicable
Explosive limit – upper (%):	Not applicable
Vapor pressure:	Not applicable
Vapor density:	Not applicable
Relative density:	Not determined
Solubility (ies):	Not determined
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not applicable
Decomposition temperature:	Not applicable
Viscosity:	Not applicable
Volatile organic compounds:	Not determined

SECTION 10: Stability and reactivity

Reactivity: No hazardous reactions anticipated under normal storage and handling conditions.

- Chemical stability:** Stable under normal ambient and anticipated conditions of use
- Possibility of hazardous reactions:** Hazardous polymerization may occur.
- Conditions to avoid:** Avoid high temperatures. Contact with incompatible materials.
- Incompatible materials:** Materials to avoid include Strong acids, Strong bases, Strong oxidizers.
- Hazardous decomposition Products:** Carbon monoxide, Carbon dioxide (CO₂)

SECTION 11: Toxicological information

Information on likely routes of exposure:

- Inhalation:** Expected to be a route of exposure
- Ingestion:** Expected to be a route of exposure
- Skin:** Expected to be a route of exposure
- Eyes:** Expected to be a route of exposure

Symptoms related to the physical, chemical, and toxicological characteristics:

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

Delayed and immediate effects and chronic effects from short or long-term exposure:

Suspected of causing genetic defects.

Numerical measures of toxicity (such as acute toxicity estimates):

Acute toxicity: Not expected to cause acute toxicity

Substance	Test Type (species)	Value
Bisphenol A Epoxy Resin	LD ₅₀ Oral (Rat)	11,300 mg/kg
	LD ₅₀ Dermal (Rabbit)	> 23,200 mg/kg
	LC ₅₀ Inhalation (Rat)	None known
1,4-Butanediol Diglycidyl Ether	LD ₅₀ Oral (Rat)	1134 mg/kg
	LD ₅₀ Dermal (Rat)	1130 mg/kg
	LC ₅₀ Inhalation (Rat)	None known
2-Ethylhexyl Glycidyl ether	LD ₅₀ Oral (Rat)	> 5000 mg/kg
	LD ₀ Dermal (Rabbit)	> 4000 mg/kg
	LC ₀ Inhalation (Rat)	> 0.15 mg/L 7h
O-Cresyl Glycidyl Ether	LD ₅₀ Oral (Rat)	> 5000 mg/kg
	LD ₀ Dermal (Rabbit)	> 4000 mg/kg
	LC ₀ Inhalation (Rat)	> 0.15 mg/L 7h

Skin corrosion/irritation:	Causes skin irritation.
Serious eye damage/eye irritation:	Causes serious eye irritation
Respiratory or skin sensitization:	May cause an allergic skin reaction.
Germ cell mutagenicity:	Suspected of causing genetic defects.
Carcinogenicity:	Not expected to cause cancer.
Reproductive toxicity:	Not expected to damage fertility or the unborn child.
STOT – Single exposure:	Not expected to cause specific target organ toxicity after a single exposure.
STOT – Repeat exposure:	Not expected to cause specific target organ toxicity after prolonged or repeated exposure.
Aspiration hazard:	This product is not anticipated to be an aspiration hazard if swallowed.

If the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA:

Chemical Name	ACGIH	IARC	NTP	OSHA
Bisphenol A Epoxy Resin	Not listed	Not listed	Not listed	Not listed
1,4-Butanediol Diglycidyl Ether	Not listed	Not listed	Not listed	Not listed
2-Ethylhexyl Glycidyl ether	Not listed	Not listed	Not listed	Not listed
O-Cresyl Glycidyl Ether	Not listed	Not listed	Not listed	Not listed

SECTION 12: Ecological information

Ecotoxicity (aquatic and terrestrial, where available):

Product data: Toxic to aquatic life with long lasting effects

Substance	Test Type	Species	Value
Bisphenol A Epoxy Resin	LC ₅₀	Fish - <i>Salmo gairdneri</i>	1.5 mg/L 96h
	EC ₅₀	Invertebrates - <i>Daphnia magna</i>	1.7 mg/L 48h
	EC ₅₀	Algae - <i>Scenedesmus capricornutum</i> ,	9.4 mg/L 72h
1,4-Butanediol Diglycidyl Ether	LC ₅₀	Fish - <i>Oryzias latipes</i>	13 mg/L 96h
	EC ₅₀	Invertebrates - <i>Daphnia magna</i>	223 mg/L 48h
	EC ₅₀	Algae - <i>Selenastrum capricornutum</i>	> 93 mg/L 72h
2-Ethylhexyl Glycidyl ether	LC ₅₀	Fish - <i>Oncorhynchus mykiss</i>	> 5000 mg/L 96h
	EL ₅₀	Invertebrates - <i>Daphnia magna</i>	7.2 mg/L 48h
	EC ₅₀	Algae	843.75 mg/L 72h
O-Cresyl Glycidyl Ether	LC ₅₀	Fish - <i>Oncorhynchus mykiss</i>	> 5000 mg/L 96h
	EL ₅₀	Invertebrates - <i>Daphnia magna</i>	7.2 mg/L 48h
	EC ₅₀	Algae	843.75 mg/L 72h

Persistence and Degradability:

Not determined

Bioaccumulative Potential:

Not determined

Mobility in Soil:

Not determined.

Other adverse effects (such as hazardous to the ozone layer):

Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations
--

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

Product

Dispose of waste materials in accordance with applicable local and national laws and regulations. Where possible, recycling is preferred to disposal or incineration. Contact the proper local authorities.

Contaminated packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport Information**US Department of Transportation Classification (49CFR)**

UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Bisphenol A Epoxy Resin), 9, III

IMDG (Transport by sea)

UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Bisphenol A Epoxy Resin), 9, III

IATA (Country variations may apply)

UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Bisphenol A Epoxy Resin), 9, III

Environmental hazards

Marine pollutant: YES

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

Not applicable

Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.

None known

SECTION 15: Regulatory Information**USA:**

United States Federal Regulations: This SDS complies with the OSHA, 29 CFR 1910.1200. The product is classified as hazardous under OSHA.

Toxic Substances Control Act (TSCA) – All of the ingredients are listed on the U.S. EPA TSCA Inventory List.

Emergency Planning and Community Right To-Know Act (EPCRA)

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A): None listed

SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370 (amended 2018)):

Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Germ cell mutagenicity

Section 313 Toxic Chemicals (40 CFR 372.65):

None of the components are listed

STATE REGULATIONS:

This SDS contains specific health and safety data that is applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986): None listed

Massachusetts Right to Know: None of the components are listed on the Massachusetts Right to Know list.

New Jersey Right to Know None of the components are listed on the New Jersey Right to Know List.

Pennsylvania Right to Know: None of the components are listed on the Pennsylvania Right to Know List.

SECTION 16: Other Information

Revision Date: August 30, 2023

Version: 1.0

DISCLAIMER:

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



Trade name: EPX50LT-OVERLAY Part B

SECTION 1: Identification

Product identifier used on the label:

Product Name: EPX50LT-OVERLAY Part B

Other means of identification:

Product Code Number: Not available

Recommended use of the chemical and restrictions on use:

Recommended use: Epoxy Bonding Agent.

Recommended restrictions: Uses other than as recommended above

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Company Name: E-Chem, LLC

Company Address: 4102 El Rey Rd. SE
Albuquerque, NM 87105

Company Telephone: Phone: 505.217.2121

Company Contact Email: Fax: 505.217.3721

Email: mail@e-chem.net

Web: www.e-chem.net

Emergency phone number: Chemtrec at 1-800-424-9300 24 Hours

Outside the U.S., call Chemtrec collect at 703-527-3887

SECTION 2: Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200:

Physical hazards

None known

Health hazards

Acute toxicity, oral, category 4

Skin corrosion/irritation, category 1A

Serious eye irritation, category 1

Reproductive toxicity, category 2

Environmental hazards

Not adopted under OSHA paragraph (d) of §1910.1200

GHS Signal word: DANGER

GHS Hazard statement(s): Harmful if swallowed
Causes severe skin burns and eye damage
Suspected of damaging fertility or the unborn child.

GHS Hazard symbol(s):**GHS Precautionary statement(s):****Prevention:**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust or mists.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.

Response:

- If swallowed: Call a poison center/doctor if you feel unwell.
- 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.
- If exposed or concerned: Get medical advice/attention.
- Specific treatment (see sections 4 to 8 on this SDS and any further information on the label).
- Wash contaminated clothing before reuse.

Storage:

- Store locked up.

Disposal:

- Dispose of contents/container to an approved disposal site in accordance with local/regional/national/ international regulations

Hazard(s) not otherwise classified (HNOC):

None known.

Percentage of ingredient(s) of unknown acute toxicity:

23% of the mixture consists of ingredients of unknown acute toxicity (dermal).

26% of the mixture consists of ingredients of unknown acute toxicity (inhalation).

SECTION 3: Composition/information on ingredients
Mixture:

Chemical name	CAS#	Concentration (weight %)
Styrenated Phenol	61788-44-1	20 - 60%
4-Nonyl Phenol	84852-15-3	20 - 60%
2-Methylpentamethylenediamine	15520-10-2	10 – 25%
2,4,6-Tri(dimethylaminomethyl)phenol	90-72-2	≤ 5%

Note: The balance of the ingredients is not classified as hazardous or are below the concentration limit to be classified as hazardous, under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

SECTION 4: First-aid measures
Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion:

Inhalation: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Seek medical advice.

Skin contact: Remove contaminated clothing. Wash with water and soap and rinse thoroughly. Seek medical advice if irritation or pain develops.

Eye contact: In case of eye contact, rinse with plenty of water for at least 15 minutes. If irritation from exposure to vapor develops, move to fresh air. Get medical attention if symptoms develop.

Ingestion: Do NOT induce vomiting. Get medical attention immediately. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Harmful if swallowed. Causes severe skin burns and eye damage. Suspected of damaging fertility or the unborn child.

Indication of immediate medical attention and special treatment needed:

If any symptoms are observed, contact a physician and give them this SDS sheet. Provide general supportive measures and treat symptomatically.

SECTION 5: Fire-fighting measures**Suitable (and unsuitable) extinguishing media:**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Not expected to be flammable. Use extinguishing media suitable for the surrounding area.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

CORROSIVE! During burning, irritating and toxic gases may be generated by pyrolysis or combustion. Container may explode when heated.

Hazardous combustion products may include the following substances: Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides.

Special protective equipment and precautions for fire-fighters:

Cool containers with water until well after fire is out. Do not approach the tank surrounded by fire until it is extinguished.

Wear self-contained breathing apparatus and protective clothing. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Keep out of drains, surface waters and soil against pollution.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

No action shall be taken involving any personal risk or without suitable training. Keep unnecessary personnel away from and upwind of spill/leak. Wear appropriate personal protective equipment (refer to Section 8 Exposure controls/ personal protection) and avoid inhalation or contact with eyes and skin. Prevent runoff and contact with waterways, drains or sewers.

Methods and materials for containment and cleaning up:

Large Spills: Stop the flow of material, if safe to do so. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Small Spills: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage**Precautions for safe handling:**

Avoid breathing mist or vapor. Avoid contact with skin or eyes. Avoid prolonged exposure.

Wear appropriate personal protective equipment. Wash hands thoroughly after handling.

Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibles:

Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

Substance	US OSHA PELs		US ACGIH TLVs		NIOSH OELs	
	TWA (8 hour)	STEL (15 min)	TWA (8 hour)	STEL (15 min)	IDLH	TWA (8hr)
Styrenated Phenol	No data available	No data available	2 ppm, 7.3 mg/m ³	No data available	No data available	No data available
4-Nonyl Phenol	No data available	No data available	No data available	No data available	No data available	No data available
2-Methylpentamethylenediamine	No data available	No data available	No data available	No data available	No data available	No data available
2,4,6-Tri(dimethylaminomethyl) phenol	No data available	No data available	No data available	No data available	No data available	No data available

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

If exposure limits have not been established, maintain airborne levels to an acceptable level.

Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Concentrations should be monitored hazardous substances in the workplace in accordance with recognized test methods. Mode, method, type and frequency of testing and measurement of harmful factors in the working environment should meet the requirements of local/regional/national laws.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear safety glasses with side shields (or goggles). Use equipment for eye protection tested and approved under NIOSH standards.

Skin and hand protection: Wear appropriate chemical resistant 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 cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. The selected protective gloves have to satisfy the specifications of ASTM F739.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a chemical respirator with organic vapor cartridge and full facepiece. Use respirators and components tested and approved under appropriate government standards such as NIOSH).

General hygiene considerations: The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Wash hands after use.

SECTION 9: Physical and chemical properties

Appearance (physical state, color, etc.):

Physical state: Liquid

Color: Yellow

Odor: Ammoniacal

Odor threshold: Not determined

pH: Not applicable

Melting point/freezing point: Not determined

Initial boiling point and boiling range: Not applicable

Flash point: Not applicable

Evaporation rate: Not applicable

Flammability (solid, gas): Not expected to be flammable

Upper/lower flammability or explosive limits

Flammability limit – lower (%): Not applicable

Flammability limit – upper (%): Not applicable

Explosive limit – lower (%): Not applicable

Explosive limit – upper (%): Not applicable

Vapor pressure: Not applicable

Vapor density: Not applicable

Relative density: Not determined

Solubility (ies): Not determined

Partition coefficient (n-octanol/water): Not determined

Auto-ignition temperature: Not applicable

Decomposition temperature: Not applicable

Viscosity: Not applicable
Volatile organic compounds: Not determined

SECTION 10: Stability and reactivity

Reactivity: No hazardous reactions anticipated under normal storage and handling conditions.
Chemical stability: Stable under normal ambient and anticipated conditions of use
Possibility of hazardous reactions: Hazardous polymerization may occur.
Conditions to avoid: Avoid high temperatures. Contact with incompatible materials.
Incompatible materials: Materials to avoid include Strong acids, Strong bases, Strong oxidizers, Strong reducers.
Hazardous decomposition Products: Carbon monoxide, Carbon dioxide (CO₂), Silica compounds, Nitrogen oxides.

SECTION 11: Toxicological information

Information on likely routes of exposure:

Inhalation: Expected to be a route of exposure
Ingestion: Expected to be a route of exposure
Skin: Expected to be a route of exposure
Eyes: Expected to be a route of exposure

Symptoms related to the physical, chemical, and toxicological characteristics:
 Harmful if swallowed. Causes severe skin burns and eye damage.

Delayed and immediate effects and chronic effects from short or long-term exposure:
 Suspected of damaging fertility or the unborn child.

Numerical measures of toxicity (such as acute toxicity estimates):

Acute toxicity: Harmful if swallowed

Substance	Test Type (species)	Value
Styrenated Phenol	LD ₅₀ Oral (Rat)	> 2500 mg/kg
	LD ₅₀ Dermal (Rabbit)	> 7940 mg/kg
	LC ₅₀ Inhalation (Rat)	158.31 mg/L 4hr
4-Nonyl Phenol	LD ₅₀ Oral (Rat)	1246 mg/kg
	LD ₅₀ Dermal (Rabbit)	None known

	LC ₅₀ Inhalation (Rat)	None known
2-Methyl pentamethylene diamine	LD ₅₀ Oral (Rat)	1170 mg/kg
	LD ₅₀ Dermal (Rat)	1870 mg/kg
	LC ₅₀ Inhalation (Rat)	4.9 mg/L 1h
2,4,6-Tri(dimethylamino methyl)phenol	LD ₅₀ Oral (Rat)	2169 mg/kg
	LD ₅₀ Dermal (Rabbit)	> 1 mL/kg
	LC ₅₀ Inhalation (Rat)	None known

Skin corrosion/irritation:	Causes severe skin burns.
Serious eye damage/eye irritation:	Causes serious eye damage
Respiratory or skin sensitization:	Not expected to cause respiratory or skin sensitization.
Germ cell mutagenicity:	Not expected to cause genetic defects.
Carcinogenicity:	Not expected to cause cancer.
Reproductive toxicity:	Suspected of damaging fertility or the unborn child.
STOT – Single exposure:	Not expected to cause specific target organ toxicity after a single exposure.
STOT – Repeat exposure:	Not expected to cause specific target organ toxicity after prolonged or repeated exposure.
Aspiration hazard:	This product is not anticipated to be an aspiration hazard if swallowed.

If the hazardous chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition), or by OSHA:

Chemical Name	ACGIH	IARC	NTP	OSHA
Styrenated Phenol	Not listed	Not listed	Not listed	Not listed
4-Nonyl Phenol	Not listed	Not listed	Not listed	Not listed
2-Methyl penta methylenediamine	Not listed	Not listed	Not listed	Not listed
2,4,6-Tri(dimethyl amino methyl)phenol	Not listed	Not listed	Not listed	Not listed

SECTION 12: Ecological information

Ecotoxicity (aquatic and terrestrial, where available):

Product data: Toxic to aquatic life with long lasting effects

Substance	Test Type	Species	Value
Styrenated Phenol	LC ₅₀	Fish	5.6 mg/L 96h
	EC ₅₀	Invertebrates - Daphnia magna	4.6 mg/L 48h
	EC ₅₀	Algae	1.35 mg/L 72h
4-Nonyl Phenol	LC ₅₀	Fish Pimephales promelas	0.096 mg/L 96h
	EC ₅₀	Invertebrates Daphnia magna	0.085 mg/L 48h
	EC ₅₀	Algae Pseudokirchneriella subcapitata	1.3 mg/L 72h
2-Methyl pentamethylene diamine	LC ₅₀	Fish	1825 mg/L 96h
	EC ₅₀	Invertebrates - Daphnia magna	19.8 mg/L 48h
	EC ₅₀	Algae	> 100 mg/L 72h
2,4,6-Tri(dimethyl aminomethyl)phenol	LC ₅₀	Fish Cyprinus carpio	> 100 mg/L 96h
	EC ₅₀	Invertebrates Daphnia magna	> 100 mg/L 48h
	EC ₅₀	Algae Raphidocelis subcapitata	46.7 mg/L 72h

Persistence and Degradability:

Not determined

Bioaccumulative Potential:

Not determined

Mobility in Soil:

Not determined.

Other adverse effects (such as hazardous to the ozone layer):

Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

Product

Dispose of waste materials in accordance with applicable local and national laws and regulations. Where possible, recycling is preferred to disposal or incineration. Contact the

proper local authorities.

Contaminated packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport Information**US Department of Transportation Classification (49CFR)**

UN2735 AMINES, LIQUID, CORROSIVE, N.O.S. (2-Methylpentamethylenediamine), 8, III

IMDG (Transport by sea)

UN2735 AMINES, LIQUID, CORROSIVE, N.O.S. (2-Methylpentamethylenediamine), 8, III

IATA (Country variations may apply)

UN2735 AMINES, LIQUID, CORROSIVE, N.O.S. (2-Methylpentamethylenediamine), 8, III

Environmental hazards

Marine pollutant: YES

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)

Not applicable

Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.

None known

SECTION 15: Regulatory Information**USA:**

United States Federal Regulations: This SDS complies with the OSHA, 29 CFR 1910.1200. The product is classified as hazardous under OSHA.

Toxic Substances Control Act (TSCA) – All of the ingredients are listed on the U.S. EPA TSCA Inventory List.

Emergency Planning and Community Right To-Know Act (EPCRA)

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A): None listed

SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370 (amended 2018)):

Skin corrosion or irritation

Serious eye damage or eye irritation

Reproductive toxicity

Section 313 Toxic Chemicals (40 CFR 372.65):

None of the components are listed

STATE REGULATIONS:

This SDS contains specific health and safety data that is applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986): None listed

Massachusetts Right to Know: None of the components are listed on the Massachusetts Right to Know list.

New Jersey Right to Know None of the components are listed on the New Jersey Right to Know List.

Pennsylvania Right to Know: None of the components are listed on the Pennsylvania Right to Know List.

SECTION 16: Other Information

Revision Date: August 30, 2023

Version: 1.0

DISCLAIMER:

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.