1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: Epoxy MS-907 Plus
Two Part Adhesive
Part B

Product Use: Hardener part of a two-part adhesive

MANUFACTURER/DISTRIBUTOR:

Miller-Stephenson Chemical
55 Backus Ave.
Danbury, Conn. 06810 USA
(203) 743-4447

Emergency Phone Number:
(800) 424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
Acute Toxicity, oral: Category 4
Skin Corrosion/Irritation: Category 1B
Serious Eye Damage/Eye Irritation: Category 1
Skin Sensitization: Category 1
Reproductive toxicity: Category 1B
Hazardous to the aquatic environment, acute hazard: Category 1
Hazardous to the aquatic environment, long-term hazard: Category 1

Label elements:
Signal word
Warning

Pictograms

Hazard Statements
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements
Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves. Wear eye or face protection. Wear protective clothing
Avoid release to the environment.
Avoid breathing dust.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Response:
Collect spillage.
IF exposed or concerned: Get medical attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. before reuse. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician.
IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical attention.
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 or physician.
Storage: Store locked up.
Disposal: Dispose of the contents and container according to local, regional, national and international regulations.

3. INGREDIENTS

Material (s)	CAS No.	Approximate %
4-Nonylphenol, Branched	84852-15-3	4 – 20
2-Piperazin-1-Yiethylamine	140-31-8	10 – 20
2,2'-Ethylenedioxydiethyl bis(2-ethylhexanoate)	94-28-0	4 – 20
2,4,6-tris (Dimthylaminomethyl)phenol	90-72-2	4 – 10
Ethanediol	107-21-1	1 – 5
3,6-Diazaoctanethylenediamine	112-24-3	1 – 5
Benzyl alcohol	100-51-6	1 – 4
bis[(Dimethylamino)methyl] phenol	71074-89-0	0.1 – 0.6
Silica, amorphous, fumed, cryst.-free	112945-52-5	1 – 5
Phenol, 2-nonyl-, branched	91672-41-2	1 – 5
2-(2-Aminoethylamino) Ethanol	111-41-1	0 – 2

4. FIRST AID MEASURES

Inhalation: Get medical attention immediately. Call a poison center or physician. Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen and if not breathing, give artificial respiration, which must be provided by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Exposed person may need to be kept under medical attention for 48 hours.

Eye: Get medical attention immediately. Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the eyelids. Check to remove contact lenses. Chemical burns must be treated immediately by a physician.

Skin: Get medical attention immediately. Call a poison center or physician. Immediately wash skin with plenty of soap and water. Remove contaminated clothing and shoes while wearing gloves. Continue rinsing for at least 20 minutes. Chemical burns must be treated immediately by a physician. Wash clothing and shoes thoroughly before reuse.

Oral: Get medical attention immediately. Call a poison center or physician. Wash mouth out with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small amounts of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. DO NOT induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low to prevent from entering the lungs. Chemical burns must be treated immediately by a physician. Never give anything to an unconscious person.

Most important symptoms/effects, acute and delayed:
Potential acute health effects:
Eye contact: Causes serious eye damage.
Inhalation: No known significant effects or critical hazards.
Skin contact: Causes severe burns. May cause an allergic skin reaction.
Ingestion: Harmful if swallowed.
Over-exposure signs/symptoms:
Eye contact: Adverse symptoms may include the following: pain or irritation, watering, redness.
Inhalation: Adverse symptoms may include the following: reduced fetal weight, increases in fetal deaths, skeletal malformations.
Skin contact: Adverse symptoms may include the following: pain or irritation, redness, blistering may occur, reduced fetal weight, increase in fetal deaths, skeletal malformations.
Ingestion: Adverse symptoms may include the following: stomach pains, reduced fetal weight, increase in fetal deaths, skeletal malformations.
Indication of immediate medical attention and special treatment needed, if necessary:
Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be under medical observation for 48 hours.
Specific treatments: No specific treatment.
Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus (SCBA). It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5. FIRE FIGHTING MEASURES

Flash Point: Not Available

Autoignition Temperature: Not Available **Flammable Limits in Air, % by Vol.:** Not Available

Suitable Extinguishing Media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

Special hazards: This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products: Decomposition products may include the following materials: Carbon dioxide, Carbon monoxide, Nitrogen oxides, Metal oxides.

Special Fire Fighting Instruction: Wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions & Protective equipment: Only emergency responders with specialize clothing is required to deal with the spillage. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.

Environmental precautions: Prevent product from entering drains, sewers or open waters. Inform the authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. Maybe harmful to the environment if released in large quantities. Collect spillage.

Clean-up methods: Ensure adequate ventilation. Wear appropriate personal protective equipment. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed labeled waste container. Store container until ready for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Use the appropriate personal protective equipment. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure – obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only the adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers could be hazardous, because of residue. Do not reuse container. Do not eat, drink or smoke when using this material. Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage: Store in accordance with local regulations. Store in original container protected from sunlight in a dry, cool, well ventilated area away from incompatible materials (Section 10), food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits (TWA):	TLV (ACGIH)	PEL (OSHA)
4-Nonylphenol, Branched	None	None
2-Piperazin-1-Yiethylamine	None	None
2,2-Ethylenedisoxydiethyl bis (2-ethylhexanoate)	None	None
2,4,6-tris (Dimthylaminomethyl) phenol	None	None
Ethanediol	100 mg/m^3 (Aerosol)	Not established
3,6-Diazaoctanethylenediamine	Not established	Not established
Benzyl alcohol	Not established	Not established
bis[(Dimethylamino)methyl] phenol	None	None
Silica, amorphous, fumed, cryst.-free	Not established	Not established
Phenol, 2-nonyl-, branched	None	None
2-(2-Aminoethylamino) Ethanol	None	None

Engineering controls: Use local exhaust ventilation to maintain worker exposure below established exposure limits.

Hygiene measures: Wash hands, and face thoroughly after handling and before eating, smoking, and using the lavatory and at the end of work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure the eyewash stations and safety showers are close to the workstation location.

Respiratory protection: Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists.

Skin protection: Chemical resistant, impermeable gloves. The protective time of the gloves cannot be accurately estimated. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by specialist before handling this product.

Eye/face protection: Safety goggles or safety glasses with side shields.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N.A.

VOC: 47g/L (tested per EPA CFR 40, Part 60, method 24)

Relative Density: 1.2

Vapor Pressure (mmHg): N.A.

Vapor Density (Air=1): N.A.

Solubility in H_2O: Insoluble

pH Information: N.A.

Evaporation Rate (Ether=1): N.A.

Form: Paste

Appearance: Viscous gray paste

Color: Gray

Odor: Amine-like

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous reactions: None under normal conditions of storage and use, hazardous reactions will not occur. Hazardous polymerization will not occur.

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

Incompatability: Oxidizing materials.

Conditions to avoid: No specific data.

11. TOXICOLOGICAL INFORMATION

4-Nonylphenol, Branched

Oral Acute Toxicity: LD50: 1300 mg/kg in Rat
Skin Corrosion/Irritation: Severe irritant in Rabbit, 24 hours, 500 mg
Serious Eye Irritation/ Eye Irritation: Severe irritant in Rabbit, 100 mg
Carcinogenicity: Not classified based on available information
STOT-single exposure: No data available

2,2-Ethylenedisoxydiethyl bis (2-ethylhexanoate)

Oral Acute Toxicity: LD50: 31 g/kg in Rat
Skin Corrosion/Irritation: Mild irritant in Rabbit, 500 mg
Serious Eye Irritation/ Eye Irritation: No irritation, Rabbit
Carcinogenicity: Not classified based on available information.
STOT-single exposure: No data available

2-Piperazin-1-Yiethylamine

Skin Corrosion/Irritation: Severe irritant in Rabbit, 24 hours 5 mg
Serious Eye Irritation/ Eye Irritation: Moderate irritant in Rabbit, 24 hours 20 mg
Carcinogenicity: Not classified based on available information.
STOT-single exposure: No data available

2,4,6-tris (Dimthylaminomethyl) phenol

Dermal Acute Toxicity: LD50: 1280 mg/kg in Rat
Oral Acute Toxicity: LD50: 1200 mg/kg in Rat
Skin Corrosion/Irritation: Severe irritant in Rabbit, 24 hours 2 mg
Serious Eye Irritation/ Eye Irritation: Severe irritant in Rabbit, 24 hours 50 µg
Carcinogenicity: Not classified based on available information.
STOT-single exposure: No data available

Ethanediol

Oral Acute Toxicity: LD50: 4700 mg/kg in Rat
Skin Corrosion/Irritation: Mild irritant in Rabbit, 555 mg
Serious Eye Irritation/ Eye Irritation: Moderate irritant in Rabbit, 6 hours 1440 mg
Mild irritant in Rabbit, 24 hours 500 mg
Carcinogenicity: ACGIH classification: A4
STOT-single exposure: No data available

3,6-Diazaoctanethylenediamine

Oral Acute Toxicity: LD50: 2500 mg/kg in Rat
Dermal Acute Toxicity: LD50: 805 mg/kg in Rabbit
Skin Corrosion/Irritation: Severe irritant in Rabbit, 24 hours 5 mg
Serious Eye Irritation/ Eye Irritation: Severe irritant in Rabbit, 49 mg
Carcinogenicity: Not classified based on available information.
STOT-single exposure: No data available

Benzyl alcohol

Oral Acute Toxicity: LD50: 1230 mg/kg in Rat
Dermal Acute Toxicity: LD50: 2000 mg/kg in Rabbit
Skin Corrosion/Irritation: Moderate irritant in Rabbit, 24 hours 100 mg
Serious Eye Irritation/ Eye Irritation: No data
Carcinogenicity: Not classified based on available information.
STOT-single exposure: No data available

Silica, amorphous, fumed, cryst.-free

Oral Acute Toxicity: LD50: 3160 mg/kg in Rat
Skin Corrosion/Irritation: No data
Serious Eye Irritation/ Eye Irritation: No data
Carcinogenicity: IARC Classification: 3
STOT-single exposure: Category 3, Respiratory tract irritation

2-(2-Aminoethylamino) Ethanol

Oral Acute Toxicity: LD50: 3 g/kg in Rat
Dermal Acute Toxicity: LD50: 2250 mg/kg in Rat
Skin Corrosion/Irritation: Mild irritant in Rabbit, 445 mg
Serious Eye Irritation/ Eye Irritation: Severe irritant in Rabbit, 50 mg
Carcinogenicity: Not classified based on available information.
STOT-single exposure: Category 3, Respiratory tract irritation

All ingredients

Skin sensitization: No data available
Respiratory Sensitization: No data available
Germ Cell Mutagenicity: No data available
Reproductive Toxicity: No data available
STOT-repeated exposure: No data available
Aspiration toxicity: No data available

12. ECOLOGICAL INFORMATION

4-Nonylphenol, Branched
72 hours Acute EC50 in Skeleonema costatum (Algae): 0.03 mg/L Marine water
96 hours Acute EC50 in Skeleonema costatum (Algae): 0.027 mg/L Marine water
48 hours Acute EC50 in Eohaustorius estuarius-Adult (Crustaceans): 137 µg/L Marine water
96 hours Acute LC50 in Pleuronectes americanus -Larvae (Fish): 17 µg/L Marine water
96 hours Chronic EC10 in Skeleonema costatum (Algae): 0.012 mg/L in Marine water
21 days Chronic NOEC in Gammarus fossarum- Adult (Crustaceans): 5 µg/L Fresh water
33 days Chronic NOEC in Pimephales promelas – Embryo (Fish): 7.4 µg/L Fresh water
Bioaccumulative potential: $LogP_{ow}$: 5.4; BCF: 740; Potential: high

2-Piperazin-1-Yiethylamine
96 hours Acute LC50 in Pimephales promelas (Fish): 2190000 µg/L Fresh water
Bioaccumulative potential: $LogP_{ow}$: -1.48; Potential: low

2,2-Ethylenedisoxydiethyl bis (2-ethylhexanoate)
Bioaccumulative potential: $LogP_{ow}$: 6.1; Potential: high

2,4,6-tris (Dimthylaminomethyl) phenol
Bioaccumulative potential: $LogP_{ow}$: 0.219; Potential: low

Ethanediol
48 hours Acute LC50 in Ceriodaphnia dubia-Neonate (Crustaceans): 6900000 µg/L Fresh water
48 hours Acute LC50 in Daphnia magna-Neonate (Daphnia): 41000000 µg/L Fresh water
96 hours Acute LC50 in Pimephales promelas (Fish): 8050000 µg/L Fresh water
Bioaccumulative potential: $LogP_{ow}$: -1.36; Potential: low

3,6-Diazaoctanethylenediamine
96 hours Acute EC50 in Pseudokirchneriella subcapitata (Algae): 3700 µg/L Fresh water
48 hours Acute LC50 in Daphnia magna (Daphnia): 33900 µg/L Fresh water
Bioaccumulative potential: $LogP_{ow}$: -1.66 to -1.4; Potential: low

Benzyl alcohol
96 hours Acute LC50 in Pimephales promelas-Juvenile (Fish): 460000 µg/L Fresh water
Bioaccumulative potential: $LogP_{ow}$: 0.87; Potential: low

2-(2-Aminoethylamino) Ethanol
Bioaccumulative potential: $LogP_{ow}$: -1.46; BCF: <0.2; Potential: low

Persistence and degradability: There is no data available.

Mobility in Soil: Not available.

Other adverse effects: No known significant effects critical hazards.

13. DISPOSAL CONSIDERATIONS

The generation of waste would be avoided or minimized whenever possible. Disposal of this product, solutions and any by-products should comply with the requirements of the environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contactor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not possible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues.

14. TRANSPORT INFORMATION

U.S. DOT
Proper Shipping Name: Consumer Commodity
Hazard Class: ORM-D
Identification No. None
Packing Group: None

IATA
Proper Shipping Name: Amines, solid, corrosive, n.o.s. (4-Nonylphenol, Branched, 2-Piperazin-1-Yiethylamine)
Hazard Class: 8
Identification No. UN3259
Packing Group: III
Environmental hazard: Yes

IMDG
Proper Shipping Name: Amines, solid, corrosive, n.o.s. (4-Nonylphenol, Branched, 2-Piperazin-1-Yiethylamine)
Marine Pollutant (4-Nonylphenol, Branched)
Hazard Class: 8
Identification No. UN3259
Packing Group: III
Environmental hazard: Yes

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
SARA Section 302/304: No products were found
SARA Section 311/312: Immediate Health, Delayed Health
SARA 313: 4-Nonylphenol, Branched, CAS No. 84852-15-13; Ethanediol, CAS No. 107-21-1
California Proposition 65: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (Ethanediol is known to the State of California to cause birth defects or other reproductive harm, and Crystalline silica is known to the State of California to cause cancer).

Canada Regulatory Information

Canadian NPRI : The following components are listed: 4-Nonylphenol, Branched, Ethanediol
CEPA Toxic substances: The following components are listed: 4-Nonylphenol, Branched,
Canadian Inventory: Not determined.

16. OTHER INFORMATION

FOR INDUSTRIAL USE ONLY

REVISION DATE: JUNE 2018

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.