

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-111
Epoxy Stripping Agent

Product Use: Epoxy Stripper

MANUFACTURER/SUPPLIER:

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 1A
Serious Eye Damage/Eye Irritation: Category 1
Specific Target Organ Toxicity: Category 3 (Respiratory System) Single Exposure

Label elements:

Signal word

Danger

Pictograms



Hazard Statements

Causes severe skin burns and eye damage.
Harmful if swallowed.
May cause respiratory irritation.

Precautionary Statements

Do not breathe fumes, mist, vapors, spray
Use only outdoors or in a well-ventilated area.
Wash hands thoroughly after handling.
Wear protective gloves, eye protection, face protection and protective clothing.
Do not eat, drink or smoke when using this product.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician
IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. DO NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/containers in accordance with all local, regional, and international regulations.
Supplemental label elements: Do not taste or swallow. Wash thoroughly after handling.
Hazards not otherwise classified: Causes sever digestive tract burns.

3. INGREDIENTS

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
Methylene Chloride	75-09-2	>50
Formic Acid	64-18-6	<20
Phenol (Carbolic Acid)	108-95-2	<15
Trade Secret Ingredients		Balance

4. FIRST AID MEASURES

Inhalation: Get medical attention immediately. Remove patient to fresh air and keep in a restful position comfortable for breathing.

Eye: Get medical attention **immediately**. Small amounts splashed into eyes can cause irreversible tissue damage and blindness. Immediately flush with large amounts of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses and continue to rinse. Protect unharmed eye. Continue rinsing eye during transport. If eye irritation persists, consult a specialist.

Skin: Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. If on skin rinse well with plenty of water. If on clothes, remove clothes. Clean clothes and shoes thoroughly before reuse and if can't clean then discard.

Oral: Take victim immediately to hospital. Keep respiratory tract clear. **DO NOT INDUCE VOMITING.** Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

5. FIRE FIGHTING MEASURES

Flash Point: None

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media: High volume water jet.

Specific hazards arising from the chemical: Do not allow run-off from firefighting to enter drains or water courses.

Hazardous decomposition products: Carbon dioxide, carbon monoxide, smoke, phosphorus compounds, chlorine compounds.

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special Fire Fighting Instructions: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode, if necessary. Collect contaminated fire extinguishing water separately. This must not be discharged in to drains. This must be collected and disposed of properly.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors.

For Emergency Responders: Wear self-contained breathing apparatus for firefighting if necessary.

Environmental Precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do. If the product contaminates rivers and lakes or drains inform the respective authorities.

Methods and material for containment and clean up: Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling: Avoid formation of respirable particles. Do not breathe vapors. Avoid exposure – obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area and areas where it is stored. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations.

Storage Conditions: Keep container tightly closed dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations/working materials must comply with the technological safety standards. Do not store near oxidizing agents or near acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Exposure Limits:</u>	<u>TLV (ACGIH)</u>
Methylene Chloride	50 ppm TWA
Formic Acid	5 ppm TWA
Phenol (Carbolic Acid)	5 ppm TWA

Ventilation System: Local and/or general exhaust is recommended to keep employee exposure below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection: If adequate ventilation is not available a respirator with an approved respirator must be worn. In confined areas, use a self-contained breathing apparatus.

Eye Protection: Tightly fitting safety goggles. Wear face-shield and protective suit for abnormal processing problems. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection: Appropriate protective gloves, apron etc...should be used. Selection of protective clothing depends on work conditions, potential exposure conditions and may include gloves, boots, suits and other protective items.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 104°F/40°C

Percent Volatile by Volume: Not available

Density: NA

Vapor Pressure: 340 mmHg at 68°F/20°C

Vapor Density (Air=1): 2.93 at 68°F/20°C

Solubility in H₂O: Appox. 14%

pH Information: Not available

Evaporation Rate (BU-AC=1): 0.07

Form: Liquid

Appearance: Clear liquid

Color: Clear

Odor: Sharp acid odor

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and storage conditions.

Chemical Stability: Stable under normal conditions.

Material and Conditions to Avoid: Acids and bases. Organic materials. Oxidizing agents.

Hazardous decomposition products: Carbon dioxide and carbon monoxide and unburned hydrocarbons (smoke).

Possibility of hazardous reactions: No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

Methylene Chloride

Acute Oral: LD50 > 2,000 mg/kg in Rat (OECD Test Guideline 401)

Acute Dermal: LD50 > 2,000 mg/kg in Rat (OECD Test Guideline 402)

Acute Inhalation: 4 hour LD 50: 86 mg/l in Mouse

Skin corrosion/irritation: Skin – Rabbit, 4h, Irritating to skin (OECD Test Guideline 404)

Serious eye damage/eye irritation: Eyes – Rabbit, Irritating to eyes. Risk of corneal clouding.

Skin and respiratory sensitization: Local lymph node assay (LLNA) – Mouse (OECD Test Guideline 429)

Germ cell mutagenicity: Mutagenicity (mammal cell test): chromosome aberration. Results: positive (Chinese hamster ovary cells)

Carcinogenicity: Suspected human carcinogen. IARC: Group 2A: Probably carcinogenic to humans.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure:

Inhalation: May cause drowsiness or dizziness – Central nervous system.

Specific target organ toxicity - repeated exposure:

No data available

Aspiration hazard: No data available

Methylene Chloride is metabolized in the body producing carbon monoxide which increases and sustains carboxyhemoglobin levels in the blood, reducing the oxygen-carrying capacity of the blood. Difficulty in breathing, Headache, Dizziness, Nausea, Vomiting, narcosis, irritant effects, unconsciousness, respiratory paralysis, CNS disorders, inebriation. Risk of corneal clouding. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Phenol

Acute toxicity: No data available

Skin corrosion/irritation: No data available

Serious eye damage/eye irritation: No data available

Skin and respiratory sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP and OSHA.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea.

Formic Acid

Acute Oral: LD50: 730 mg/kg in Rat (OECD Test Guideline 401)

Acute Inhalation: 4 hour LD50: 7.4 mg/l in Rat

Acute Dermal: No data available

Skin corrosion/irritation: Skin – Rabbit, Severe skin irritation (Draize Test).

Serious eye damage/eye irritation: Eyes – Rabbit, Severe eye irritation

Skin and respiratory sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity: No data available

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP and OSHA.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available

Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Methylene Chloride

Toxicity: Toxicity to fish: 96 hour flow-through test LC50 - Pimephales promelas (fathead minnow) - 193.00 mg/l

Toxicity to daphnia and other aquatic invertebrates: 48 hour static test LC50 - Daphnia magna (Water flea) - 27 mg/l

Persistence and degradability:

Aerobic – Exposure time 28 days: 68% - Readily biodegradable. (OECD Test Guideline 301D)

Bioaccumulative potential: Bioaccumulation: Cyprinus carpio (Carp) – 6 weeks – 250 µg/l (Methylene Chloride)

Bioconcentration factor (BCF): 2 – 5.4 (OECD Test Guideline 305)

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Phenol

Toxicity: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

Formic Acid

Toxicity: 48 hour EC50 in daphnia magna: 34.2 mg/l

96 hour LC50 in Leuciscus idus (Golden orfe): 46 – 100 mg/l

Persistence and degradability:

Biodegradability: Result: > 90 % - Readily biodegradable (OECD Test Guideline 301C)

Biochemical Oxygen, Demand (BOD): 86 mg/g

Chemical Oxygen, Demand (COD): 348 mg/g

Ratio BOD/ThBOD: 8.60%

Bioaccumulative potential: Bioaccumulation is unlikely.

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

This product should not be allowed to enter drains, water courses or soil. Do not contaminate ponds, waterways or ground with product or used container. Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

U.S. DOT

Proper Shipping Name: Corrosive Liquid, Toxic, N.O.S. (Methylene Chloride, Phenol, Formic Acid)

Hazard Class: 8, Sub Risk 6.1

Identification No. UN2922

Packing Group: III

IATA

Proper Shipping Name: Corrosive Liquid, Toxic, N.O.S. (Methylene Chloride, Phenol, Formic Acid)

Hazard Class: 8, Sub Risk 6.1

Identification No. UN2922

Packing Group: III

IMDG

Proper Shipping Name: Corrosive Liquid, Toxic, N.O.S. (Methylene Chloride, Phenol, Formic Acid)

Hazard Class: 8, Sub Risk 6.1

Identification No. UN2922

Packing Group: III

15. REGULATORY INFORMATION

TSCA: All ingredients are listed in TSCA inventory.

California Proposition 65: This product contains a chemical, Methylene Chloride, known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

16. OTHER INFORMATION

FOR INDUSTRIAL USE ONLY

REVISION DATE: JULY 2020

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.