

## 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

**General advice:** Move out of dangerous area. Consult a physician. Show SDS to the doctor in attendance. Do not leave the victim unattended.

**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:** Not available

**Vapor Pressure:** 340 mmHg at 68°F/20°C

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

**Solubility in H<sub>2</sub>O:** Approx. 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 (ECHA) Possible damages: mucosal irritations.

**Skin corrosion/irritation:** Skin – Rabbit, 4h (OECD Test Guideline 404) Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties.

**Serious eye damage/eye irritation:** Eyes – Rabbit. Irritating to eyes (ECHA) Risk or corneal clouding.

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

**Germ cell mutagenicity:** Mutagenicity (mammal cell test); chromosome aberration. Results: positive (Test -Chinese hamster ovary cells) (OECD Test Guideline 473). Test Type: In vivo micronucleus test. Species: Mouse. Cell type: Bone marrow. Application Route:

Oral. Method: OECD Test Guideline 474. Result: negative

**Carcinogenicity:** 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, Dizziness, Nausea, Vomiting, narcosis, irritant effects, unconsciousness, respiratory paralysis, sleepiness, depressed respiration, CNS disorders, inebriation. Risk of corneal clouding.

## 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](http://www.P65Warnings.ca.gov)

**16. OTHER INFORMATION**

**FOR INDUSTRIAL USE ONLY**

**REVISION DATE: MAY 2021**

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.