



1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-115
Conformal Coating Stripper

Product Use: Conformal Coating Stripper

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 Irritation: Category 2

Serious eye damage: Category 1

Reproductive toxicity: Category 1B

Specific Target Organ Toxicity (single exposure): Category 3 (Central nervous system, Respiratory system)

Label elements:

Signal word

Danger

Pictograms



Hazard Statements

Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
May damage fertility or the unborn child.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Avoid breathing mist/vapors/spray.
Wash skin thoroughly after handling.
Do not eat, drink, or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water. IF SKIN irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
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 doctor/physician.
If eye irritation persists: Get medical attention.
If exposed or concerned: Get medical advice/attention.
Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Dispose of contents/ container in accordance with local, regional, national, and international regulations.

3. INGREDIENTS

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
Butyrolactone	96-48-0	48 – 52
N-Methyl-2-Pyrrolidone	872-50-4	48 – 52

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air. Keep patient warm and at rest. If unconscious place in recovery position and seek medical advice. Call a physician, if symptoms persist.

Eye: Flush with large amounts of water, lifting eyelids until no evidence of the chemical remains. Get medical attention. Remove contact lenses, if present and easy to do. Continue to rinse. Protect unharmed eye.

Skin: Wash skin with plenty of water for at least 15 minutes. Wash contaminated clothing before use. Get medical attention if necessary.

Oral: Do NOT induce vomiting without medical advice. Rinse mouth with water. Never give anything by mouth to an unconscious person. Get medical attention, if symptoms persist.

Most important symptoms/effects, acute and delayed: Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin include: effects of blood pressure. Harmful if swallowed. Causes serious eye damage. Causes skin irritation. May cause respiratory irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child.

5. FIRE FIGHTING MEASURES

Flammability: This product is not flammable.

Flash Point: >196°F (91°C)

Suitable Extinguishing Media: Water spray, Foam, Dry chemical, Carbon dioxide (CO₂)

Unsuitable extinguishing media: Do not use a high volume water jet.

Special hazards: If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along with the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release. Do not allow run-off from the fire fighting to enter drains or water courses.

Hazardous combustion products: Carbon dioxide and carbon monoxide, Hydrocarbons, nitrogen oxides, toxic fumes.

Special Fire Fighting Instruction: Do not enter area without personal protective equipment. Exposure to decomposition products may be a hazard to health. Wear self-contained breathing apparatus, if necessary. Use water spray for cooling exposed containers. Do not allow run-off from fire-fighting to enter drains or water sources. Contaminated fire extinguishing water must be disposed of in accordance with local regulations.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel): Remove all ignition sources. Evacuate personnel to safe area. Ensure adequate ventilation. Use appropriate personal protection equipment when in the area of spill until clean-up has been completed.

Environmental precautions: Prevent material from entering sewers, waterways, or low areas. Should not be released into the environment. If product contaminates waterway inform respective authorities.

Spill Cleanup: Contain spillage, and then collect with inert material, (e.g. sand, earth, diatomaceous earth, vermiculite, universal binder, sawdust) and place in container for disposal according to local / national regulations

7. HANDLING AND STORAGE

Handling: Avoid exposure. Use in a well-ventilated area to avoid breathing vapors. Use appropriate respiratory protection when ventilation is inadequate. When using do not eat, drink, or smoke. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Container is hazardous when empty.

Storage Conditions: Store tightly sealed in a clean, dry, and well-ventilated place. Do not store in temperatures that exceed 125°F/52°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Exposure Limits:</u>	<u>STEL(ACGIH)</u>	<u>TWA (WEEL)</u>
Butyrolactone	Not Established	Not Established
N-Methyl-2-Pyrrolidone	Not Established	10 ppm

Respiratory Protection: Avoid breathing vapors, mists or spray. When there is vapor formation, use NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter. In poorly ventilated areas, use an approved self-contained breathing apparatus.

Eye Protection: Avoid eye contact. Use chemical goggles or safety glasses with side shields.

Skin Protection: Avoid contact with skin. Use gloves/protective clothing that are impervious to this material when contact occurs. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Prevention of Swallowing: Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: 397°F/203°C	Percent Volatile by Volume: 100%
Density: 1.08 g/cc at 77°F/25°C	Vapor Pressure: N.A.
Vapor Density (Air=1): N.A.	Solubility in H₂O : N.A.
pH Information: 6.0	Evaporation Rate (CC14=1): N.A.
Form: Liquid	Appearance: Clear
Color: Colorless	Odor: Mild Amine-like

10. STABILITY AND REACTIVITY

Reactivity: No decomposition if stored and applied as directed.

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: Vapors may form explosive mixture with air.

Material and Conditions to Avoid: Heat, flames, and sparks. Exposure to moisture and light. Reducing agents, Strong acids, Strong bases and Strong oxidizing agents.

Decomposition: This product can be decomposed by high temperatures (flame, glowing metal surfaces, etc.) forming Carbon oxides (CO, CO₂), Hydrocarbons, and Nitrogen compounds.

11. TOXICOLOGICAL INFORMATION

N-Methyl-2-Pyrrolidone

Acute Toxicity:

Oral: LD50: 4,150 mg/kg in rats. Method: OECD Test Guideline 401.

Dermal: LD50: 8,000 mg/kg in rabbits

Inhalation: 4 hours LC50: >5.1 mg/l in rats. Test atmosphere; dust/mist. Method: OECD Test Guideline 403.

Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Skin corrosion/irritation: May cause skin irritation and/or dermatitis. Repeated exposure may cause skin dryness and cracking.

Serious eye damage/eye irritation: Causes serious eye irritation. Irritation to eyes, reversing 7 to 21 days in rabbits.

Respiratory or skin sensitization: Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Mutagenicity: Non-mutagenic in various in-vitro and in-vivo assays.

Carcinogenicity: No evidence of carcinogenicity in animal studies.

Reproductive Toxicity: May damage fertility or the unborn child. Clear evidence of adverse effects on sexual function and fertility, and/or on development based on animal experiments.

Specific Target Organ Toxicity – single exposure: Nose: Inhalation: May cause respiratory irritation.

Specific Target Organ Toxicity – repeated exposure: Not classified based on available information.

No observed adverse effect level: 169 mg/kg in rats by ingestion for 90 days.

No observed adverse effect level: 0.5 mg/l in rats by inhalation for 90 days,

No observed adverse effect level: 826 mg/kg by skin contact for 28 days.

Aspiration toxicity: Not classified based on available information.

Butyrolactone

Acute Toxicity:

Oral: LD50: 1,582 mg/kg in rats

Dermal: LD50: > 5 g/kg in guinea pigs

Inhalation: 4 hour LC50: > 5.1 mg/l in rats (dust/mist)

Skin corrosion/irritation: Not irritating to the skin. Not classified as a skin sensitizer.

Serious eye damage/eye irritation: Causes serious eye damage. May cause irreversible eye damage. Corrosive to eyes.

Respiratory or skin sensitization: Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Genotoxicity in vitro: Ames test: Result: Negative

Chromosome aberration in vitro: Result: Negative

Genotoxicity in vivo: In vivo micronucleus test

Test species: mouse

Result: Negative

Carcinogenicity: Not classified based on available information.

Reproductive Toxicity: Not classified based on available information.

Specific Target Organ Toxicity – single exposure: May cause drowsiness and dizziness.

Specific Target Organ Toxicity – repeated exposure: Not classified based on available information.

Aspiration toxicity: Not classified based on available information.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity:

N-Methyl-2-Pyrrolidone

96 hour LC50 – Rainbow trout (*Oncorhynchus mykiss*): 359 mg/l
24 hour EC50 – Water flea (*Daphnia magna*): > 1000 mg/l
72 hour EC50 – Green algae (*Desmodesmus subspicatus*): 600 mg/l
EC10 (activated sludge): 100 mg/l

Biodegradability: Inoculum: activated sludge. Readily biodegradable. 73% in 28 days

Bioaccumulative potential: No bioaccumulation is to be expected (log Pow ≤ 3)

Partition coefficient: n-octanol/water: log Pow: -0.46 (25°C)

Mobility in Soil: No data available.

Results of PBT and vPvB assessment: The substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Butyrolactone

96 hour LC50 (static test) – Bluegill sunfish (*Lepomis macrochirus*): 56 mg/l
48 hour EC50 – Water flea (*Daphnia magna*): > 500 mg/l
ErC50 – Green algae (*Desmodesmus subspicatus*): > 1000 mg/l
EC10 – Green algae (*Desmodesmus subspicatus*): 84.4 mg/l

Biodegradability: Readily biodegradable. 95% in 14 days

Bioaccumulative potential: Partition coefficient: n-octanol/water: log Pow: -0.566 (25°C)

Mobility in Soil: No data available.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

Results of PBT and vPvB assessment: The substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

13. DISPOSAL CONSIDERATIONS

Comply with federal, state and local regulations. Remove to a permitted waste disposal facility.

14. TRANSPORT INFORMATION

U.S. DOT

Not Regulated

IATA

Not Regulated

IMDG

Not Regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA: All ingredients are listed in TSCA inventory.

SARA 313 Regulated Chemicals: N-Methyl-2-Pyrrolidone

State Regulations (U.S.)

California Proposition 65: This product contains a chemical, N-Methyl-2-Pyrrolidone, known to the State of California to cause birth defects or other reproductive harm.

REACH (E.U.)

N-Methyl-2-Pyrrolidone is an SVHC. It is considered toxic for reproduction.

16. OTHER INFORMATION

NPCA-HMIS Ratings:

Health - 3

Flammability - 2

Reactivity - 0

Personal Protective rating to be supplied by user depending on the conditions.

FOR INDUSTRIAL USE ONLY

REVISION DATE: SEPTEMBER 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.