



1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-114D
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

Skin corrosion/irritation: Category 2
Serious eye damage/eye irritation: Category 2A
Reproductive toxicity: Category 1B
Specific Target Organ Toxicity (single exposure): Category 3

Label elements:

Signal word
Danger

Pictograms



Hazard Statements

Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May damage fertility or the unborn child.

Precautionary Statements

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing fume/mist/vapors/spray.

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

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.

If eye irritation persists: Get medical advice/attention.

If exposed or concerned: Get medical advice/attention.

Store in a well-ventilated place. Keep cool. Keep container tightly closed.

Dispose of contents/ container in accordance with local, regional, national, and international regulations.

Other Hazards

In use, may form flammable/explosive vapor-air mixture. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Misuse or intentional inhalation abuse may lead to death without warning symptoms, due to cardiac effects.

3. INGREDIENTS

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
1,1,1,2,2,3,4,5,5,5-Decafluoropentane	138495-42-8	22 - 30
Trans,1,2-Dichloroethylene	156-60-5	45 - 50
Methanol	67-56-1	4 - 10
N-Methyl-2-Pyrrolidone	872-50-4	18 - 22

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air. If not breathing, give artificial respiration. Give oxygen as necessary, if qualified personnel is available. Get medical attention if necessary.

Eye: Flush with plenty of water for at least 15 minutes, lifting eyelids until no evidence of the chemical remains. Get medical attention. Remove contact lenses, if present and easy to do. Continue to rinse.

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

Oral: Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician, if symptoms persist.

Most important symptoms/effects, acute and delayed: Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May damage fertility or the unborn child. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include, stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) confusion.

5. FIRE FIGHTING MEASURES

Flammability: This product is not flammable. Does not flash.

Method: TCC

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Alcohol resistant foam, Dry chemical, Carbon dioxide (CO₂).

Unsuitable extinguishing media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Hazardous combustion products: Carbon oxides, Chlorine compounds, Fluorine compounds, Hydrocarbons, Nitrogen oxides

Specific hazards during fire: The product is not flammable but may burn at hot temperatures. Gas/vapor are heavier than air. May accumulate in confined and low places. Containers may rupture when exposed to excessive heat. Hazardous reactions will not occur under normal conditions.

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.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel): Evacuate personnel to safe area. Ventilate area, especially low or enclosed places where heavy vapors might collect. In case of insufficient ventilation, wear suitable respiratory equipment. Use appropriate personal protection equipment.

Environmental precautions: Prevent material from entering sewers, waterways, or low areas. Should not be released into the environment.

Spill Cleanup: Contain spillage, and then collect with non-combustible material, (e.g. sand, earth, diatomaceous earth, vermiculite) 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. Vapors are heavier than air and accumulate in low areas. Use only with adequate ventilation. 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 place that is well ventilated. Do not store in temperatures that exceed 125°F/52°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:

1,1,1,2,2,3,4,5,5,5-Decafluoropentane
Trans,1,2-Dichloroethylene
Methanol
N-Methyl-2-Pyrrolidone

TLV (ACGIH)

Not Established
200 ppm, TWA
200 ppm, TWA
Not Established

PEL (OSHA)

Not Established
200 ppm, 8 Hr. TWA
200 ppm, 8 Hr. TWA
Not Established

Respiratory Protection: Avoid breathing vapors, mists or spray. Use with sufficient ventilation especially for enclosed or low places. Vapors are heavier than air and can cause suffocation by reducing oxygen. Provide adequate ventilation to maintain vapor exposures below recommended limits. Wear suitable respiratory protection, when ventilation is insufficient. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection

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 impervious to this material. Discard gloves and clothing that show signs of wear.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: (Initial): 118°F/48°C

Percent Volatile by Volume: 100%

Density: 1.25 g/cc at 77°F/25°C

Vapor Pressure: 214 mm Hg at 68°F/20°C

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

Solubility in H₂O : N.A.

pH Information: Neutral

Evaporation Rate (CC14=1): N.A.

Form: Liquid

Appearance: Clear

Color: Colorless

Odor: Ethereal

10. STABILITY AND REACTIVITY

Reactivity: Hazardous reactions will not occur 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 oxidizers.

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

11. TOXICOLOGICAL INFORMATION

1,1,1,2,2,3,4,5,5,5-Decafluoropentane

Information on likely routes of exposure: Inhalation, Skin contact, Ingestion, Eye contact

Acute Toxicity: Not classified based on available information.

Skin Corrosion/Irritation: Not classified based on available information.

Serious Eye Irritation/ Eye Irritation: Not classified based on available information.

Skin Sensitization: Not classified based on available information.
Respiratory Sensitization: Not classified based on available information
Germ Cell Mutagenicity: Not classified based on available information.
Carcinogenicity: Not classified based on available information.
Reproductive toxicity: Not classified based on available information.
STOT-single exposure: Not classified based on available information.
STOT-repeated exposure: Not classified based on available information.
Aspiration toxicity: Not classified based on available information.

Trans-1,2-Dichloroethylene

Acute Oral: LD50: 7902 mg/kg in rats
Acute Dermal: LD50: > 5,000 mg/kg in rabbits
Acute Inhalation: 4 hour LC50: 95.4 mg/l in rats. Test atmosphere: vapor. Method: OECD Test Guideline 403
Skin Corrosion/Irritation: Mild skin irritation in rabbits
Serious Eye Irritation/ Eye Irritation: Mild eye irritation in rabbits. Reversing within 7 days.
Skin Sensitization: No data available
Respiratory Sensitization: No data available
Germ Cell Mutagenicity: Evidence does not support classification of a germ cell mutagen.
Carcinogenicity: Not classified based on available information.
Reproductive toxicity: Not classified based on available information.
STOT-single exposure: May cause drowsiness and dizziness.
STOT-repeated exposure: No significant health effects observed in animals at concentrations of 250 ppmV/6h/d or less.
Aspiration toxicity: Not classified based on available information.

Methanol

Inhalation Acute toxicity: 3mg/l estimated, 4 hours (vapor) (Based on harmonised classification in EU regulation 1272/2008, Annex VI)
Dermal Acute toxicity: 300 mg/kg, (estimated in humans)
Oral Acute Toxicity: 300 mg/kg, (estimated in humans)
Skin Corrosion/Irritation: No irritation, Rabbit
Serious Eye Irritation/ Eye Irritation: No irritation, Rabbit
Skin sensitization: Negative in Guinea pig (Maximization Test)
Respiratory Sensitization: Not classified based on available information.
Germ Cell Mutagenicity: Genotoxicity in vivo and vitro tests were negative.
Carcinogenicity: Negative in Mouse, 18 months (inhalation-vapor).
Reproductive Toxicity: Fertility/early embryonic development - Negative in Mouse (ingestion)
Embryo-fetal development - Positive in Mouse (ingestion). The effects were only at maternally toxic doses.
STOT-single exposure: May cause damage to organs (Eyes, Central Nervous System)
STOT-repeated exposure: NOEL: 1.06 mg/l (90 days, Inhalation) in rats
Aspiration toxicity: **Not classified based on available information**

N-Methyl-2-Pyrrolidone

Acute Toxicity:
Oral: LD50: 4,150 mg/kg in rats (Method: OECD Test Guideline 403)
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 Irritation/ Eye Irritation: Causes serious eye irritation in rabbits Irritation to eyes, reversing 7 to 21 days.
Skin sensitization: Does not cause skin sensitization.
Respiratory Sensitization: Not classified based on available information.
Germ Cell Mutagenicity: Genotoxicity in vivo and vitro tests were negative.
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.
STOT-single exposure: May cause respiratory irritation.
STOT-repeated exposure: Not classified based on available information.
Aspiration toxicity: Not classified based on available information.

12. ECOLOGICAL INFORMATION

1,1,1,2,2,3,4,5,5,5-Decafluoropentane:

Ecotoxicity: No data available

Persistence and degradability: No data available

Bioaccumulative potential: No data available

Mobility in soil: No data available

Other adverse effects

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

Trans-1,2-Dichloroethylene

96 hour LC50 in *Lepomis macrochirus* (Bluegill sunfish): 135 mg/l

48 hour EC50 in *Daphnia magna* (Water flea): 220 mg/l

72 hour EC50 in *Pseudokirchneriella subcapitata* (Green algae): 36.36 mg/l

Biodegradability: Not readily biodegradable. Method: OECD Test Guideline 301D

Bioaccumulative potential: Partition coefficient: n-: log Pow: 2.06

Methanol

96 hour LC50 in *Lepomis macrochirus* (Bluegill sunfish): 15,400 mg/l

48 hour EC50 in *Daphnia magna* (Water flea): >10,000 mg/l

96 hour EC50 in *Pseudokirchneriella subcapitata* (Green algae): 22,000 mg/l

200 hour NOEC in *Oryzias latipes* (Orange-red killfish): 15,800 mg/l

Biodegradability: Readily biodegradable. 95% biodegradable in 20 days

Bioaccumulative potential: Partition coefficient: n-octanol/water: log Pow: -0.77

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).

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.

1,1,1,2,2,3,4,5,5,5-Decafluoropentane (CAS# 138495-42-8) - The United States Environmental Protection Agency has established a Significant New Use Rule (SNUR; 40 CFR 721.5645) for this product. This product contains one or more substances which requires export notification under TSCA Section 12(b) and 40 CFR Part 707 Subpart D.

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

State Regulations (U.S.)

California Proposition 65: This product contains chemicals known to the State of California to cause cancer and/or 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 - 2

Flammability - 1

Reactivity - 1

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

FOR INDUSTRIAL USE ONLY

DATE: MARCH 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.