

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 2 (Eye, Central nervous system)

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

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.

May cause damage to organs (Eye, Central nervous system)

Precautionary Statements

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe fume/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 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 to an approved waste disposal plant.

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 if available. Get medical attention if necessary.

Eye: Immediately 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. Wash contaminated clothing before use. Get medical attention if irritation develops.

Oral: Do induce vomiting. Keep respiratory tract clear. Never give anything by mouth to an unconscious person. Call a physician if symptoms persist. Take the victim immediately to the hospital.

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). Nasal irritation, blurred vision, redness, local irritation, burning or stinging of the eye.

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: Evacuate area. Containers may rupture when exposed to excessive heat. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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. 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: 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. Containers are hazardous when empty.

Storage Conditions: Store tightly sealed in a clean, dry place that is well ventilated. Do not store in temperatures that exceed 115°F/46°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, TWA
200 ppm, 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. Eye wash bottle or station near.

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. Oxidizing agents.

Decomposition: This product can be decomposed by high temperatures (flame, glowing metal surfaces, etc.) forming Carbon oxides (CO, CO₂), Hydrocarbons, Fluorine compounds, Chlorine 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 Oral: LD50: > 5000 mg/kg in rats. Method: OECD Test Guideline 401

Acute Inhalation (vapor): 4 hour LC50: 114.428 mg/l in rats. Method: OECD Test Guideline 403

Acute Dermal: LD50: > 5000 mg/kg in rabbits. Method: OECD Test Guideline 402

Skin Corrosion/Irritation: No skin irritation in rabbits. Method: OECD Test Guideline 404

Serious Eye Irritation/ Eye Irritation: No eye irritation in rabbits. Method: OECD Test Guideline 405
Skin Sensitization: No skin sensitization in Guinea pigs. Buehler Test. Method: OECD Test Guideline 406
Respiratory Sensitization: Not classified based on available information.
Germ Cell Mutagenicity: Weight of evidence does not support classification as a germ cell mutagen.
Carcinogenicity: Not classified based on available information.
Reproductive toxicity: Weight of evidence does not support classification for reproductive toxicity.
STOT-single exposure: Inhalation (vapor): No significant health effects observed in animals at concentrations of 20mg/l/4h or less.
STOT-repeated exposure: Inhalation (vapor): No significant health effects observed in animals at concentrations of 1mg/l/6h/d or less.
Aspiration toxicity: No aspiration toxicity classification.

Trans-1,2-Dichloroethylene

Acute Oral: LD50: 7902 mg/kg in rats. Method: OECD Test Guideline 420
Acute Dermal: LD50: > 5,000 mg/kg in rabbits. Method: OECD Test Guideline 402
Acute Inhalation: 4 hour LC50: 95.5 mg/l in rats. Test atmosphere: vapor. Method: OECD Test Guideline 403
Skin Corrosion/Irritation: Mild skin irritation in rabbits. Method: OECD Test Guideline 404
Serious Eye Irritation/Eye Irritation: Eye irritation in rabbits. Reversing within 7 days. Method: OECD Test Guideline 405
Skin Sensitization: Not classified based on available information.
Respiratory Sensitization: Not classified based on available information.
Germ Cell Mutagenicity: Evidence does not support classification of a germ cell mutagen.
Carcinogenicity: Not classified based on available information.
Reproductive toxicity: Test Type: Embryo-fetal development. Inhalation in rats. Negative. Method: OECD Test Guideline 414
STOT-single exposure: May cause drowsiness and dizziness.
STOT-repeated exposure: Inhalation: 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

Acute Inhalation toxicity: 3mg/l, 4 hours. Test atmosphere: vapor. Method: Expert judgment.
Remarks: Based on national and regional regulations.
Acute Dermal toxicity: 300 mg/kg, (estimated in humans). Method: Expert judgment
Acute Oral Toxicity: 300 mg/kg, (estimated in humans). Method: Expert judgment
Skin Corrosion/Irritation: No irritation in rabbits.
Serious Eye Irritation/ Eye Irritation: No irritation in rabbits.
Skin sensitization: Test Type: Maximization Test. No skin sensitization in Guinea pigs. Based on data similar materials.
Respiratory Sensitization: Not classified based on available information.
Germ Cell Mutagenicity: Genotoxicity in vivo and vitro tests were negative.
Carcinogenicity: Negative in mice by inhalation for 18 months.
Reproductive Toxicity: Test Type: Embryo-fetal development. Positive in mice by ingestion. Remarks: The effects were seen only at maternally toxic doses.
STOT-single exposure: May cause damage to organs (Eyes, Central Nervous System)
STOT-repeated exposure: Not classified based on available information.
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 401

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

LD50: > 5,000 mg/kg in rats (male and female). Method: OECD Test Guideline 402

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

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: Species: Rabbit (Method: OECD Test Guideline 404) Result: Irritating to skin.

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-Decafluoropentane

96 hour LC50 in Danio rerio (zebra fish): 13 mg/l. Method: OECD Test Guideline 203

48 hour EC50 in Daphnia magna (Water flea): 10.6 mg/l. Method: OECD Test Guideline 202

72 hour EC50 in Selenastrum capricornutum (Green algae): >120 mg/l. Method: OECD Test Guideline 201

21 days NOEC in Daphnia magna (Water flea): 1.72 mg/l. Method: OECD Test Guideline 211

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

Bioaccumulative potential: Bioaccumulation is unlikely. Partition coefficient: noctanol/water: log Pow: 2.4 (75 °F / 24 °C)

Mobility in soil: No data available

Trans-1,2-Dichloroethylene

96 hour LC50 in Lepomis marochirus (Bluegill sunfish): 135 mg/l. Based on data similar materials

48 hour EC50 in Daphnia magna (Water flea): 220 mg/l. Method: EPA-660/3-75-009

48 hour EbC50 in Pseudokirchneriella subcapitata (Green algae): 36.36 mg/l. Method: OECD Test Guideline 201

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

Bioaccumulative potential: Partition coefficient: n-octanol/water: log Pow: 2.06

Mobility in soil: No data available

Methanol

96 hour LC50 in Lepomis marochirus (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. Method: OECD Test Guideline 201

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

Biodegradability: Readily biodegradable. 95% biodegradable in 20 days

Bioaccumulative potential: Species: *Leuciscus idus* (Golden orfe) BCF <10. Partition coefficient: n-octanol/water: log Pow: -0.77

Mobility in soil: No data available

N-Methyl-2-Pyrrolidone

96 hour LC50 in Rainbow trout (*Oncorhynchus mykiss*): 359 mg/l

24 hour Static test in Water flea (*Daphnia magna*): > 1000 mg/l

72 hour EC50 in Green algae (*Desmodesmus subspicatus*): 600 mg/l (Test type: Growth inhibition)

21 days NOEC in *Daphnia magna* (Water flea): 12.5 mg/l. End point: Reproduction Test. Test Type: semi-static test. Method: OECD Test Guideline 211

EC10 (activated sludge): 100 mg/l

Biodegradability: Readily biodegradable. 89% in 28 days. Method: OECD Test Guideline 306

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: MAY 2023

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.