



1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-124H
DPMS D0521A
Connector Lubricant

Product Use: Connector Lubricant

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

Serious Eye Damage/Irritation: Category 2B.
Specific Target Organ Toxicity (central nervous system): Category 3.

Label elements:

Signal word

Warning

Symbols

Exclamation mark

Pictograms



Hazard Statements

Causes eye irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Avoid breathing dust/fume/gas/mist/vapors/spray.
Use in a well-ventilated area.
Wash thoroughly after handling.
Pressurized container: Do not pierce or burn, even after use.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
INHALED: Remove person to fresh air and keep comfortable for breathing.
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.

Call a POISON CENTER or doctor/physician if you feel unwell.

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

3. INGREDIENTS

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
1,1,1,2-Tetrafluoroethane	811-97-2	18 – 22
1,2-Trans-dichloroethylene	156-60-5	68 – 74
Methyl Nonafluoroisobutyl Ether	163702-08-7	4 – 8
Methyl Nonafluorobutyl Ether	163702-07-6	0.5 – 4

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air. Get medical attention if necessary.

Eye: Flush with large amounts of water for at least 15 minutes, lifting eyelids until no evidence of the chemical remains. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

Skin: Remove contaminated clothing. Wash with soap and water. If you feel unwell, get medical attention. Wash contaminated clothing and shoes before reuse.

Oral: Rinse mouth. Never give anything by mouth to an unconscious person. If you feel unwell, medical attention.

Notes to Physician: Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

Flammability: This product is not flammable.

Test Method: Ignition distance test and Enclosed space ignition test

Extinguishing Media: Use a fire fighting agent suitable for surrounding fire.

Special hazards arising from the substance or mixture: Exposure to extreme heat can give rise to thermal decomposition.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Chloride	During Combustion
Hydrogen Fluoride	During Combustion

Special Fire Fighting Instruction: Water spray may be used to cool fire exposed containers and structures until fire is out if can be done with minimal risk. Exposure to extreme heat can give rise to thermal decomposition and Self-contained breathing apparatus (SCBA) and full protective equipment are required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep away from sparks, flames, and extreme heat. Evacuate area. Ventilate the area with fresh air. If a large amount of aerosols rupture and spill in confined areas, provide mechanical ventilation to disperse the vapors.

Environmental precautions: Avoid release to the environment. Prevent material from entering sewers, waterways, or low areas. Do not allow contact with soil, surface or ground water.

Methods and material for containment and cleaning up: Eliminate all potential ignition sources when cleaning up spill. Contain spillage, and then collect with inert material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

7. HANDLING AND STORAGE

Handling: Do not breathe thermal decomposition products. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products.

Storage Conditions: Store in well-ventilated area. Do not store near sources of heat, in direct sunlight or where temperatures exceed 120°F/49°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Exposure Limits:</u>	<u>TWA (ACGIH)</u>	<u>TWA (OSHA)</u>	<u>TWA (AIHA)</u>
1,2-Trans-Dichloroethylene	200 ppm	200 ppm	
Methyl Nonafluorobutyl Ether	Not Established	Not Established	750ppm
Methyl Nonafluoroisobutyl Ether	Not Established	Not Established	750 ppm
1,1,1,2-Tetrafluoroethane	Not Established	Not Established	

Respiratory Protection: An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

During heating:

Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

Organic vapor respirators may have short service life.

For questions about suitability for a specific application, consult with your respirator manufacturer.

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

Skin Protection: Chemical protective gloves are not required under normal use conditions. However, when the product is subjected to extreme heat, HF may be formed. For those cases, neoprene gloves are recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N.A.

Percent Volatile by Volume: 99%

Density: 1.26 gm/cc

Vapor Pressure: 405 mmHg at 77°F/25°C

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

Solubility in H₂O: Slight

pH Information: N.A.

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

Form: Aerosol

Appearance: Clear

Color: Clear-Colorless

Odor: Slight odor

10. STABILITY AND REACTIVITY

Stability: Stable.

Material and Conditions to Avoid: Exposure heat, sparks, or flames. Strong bases and strong oxidizing agents.

Decomposition: Carbon oxides, Hydrogen Chloride, Hydrogen-Fluoride, Perfluoroisobutylene (PFIB), toxic vapors, gases or particulate may be products of thermal decomposition. (See section 5 for hazardous decomposition products during combustion).

Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Methyl Nonafluorobutyl Ether

Acute Toxicity

Dermal: LD50 Estimated to be > 5,000 mg/kg

Ingestion: LD50 > 5,000 mg/kg, Rat

Inhalation: LC50 > 1,000 mg/l, 4 h, Rat

Skin Corrosion/Irritation: No significant irritation in Rabbits.

Serious Eye Damage/Irritation: No significant irritation in Rabbits.

Sensitization Skin: Not sensitizing in Guinea pigs.

Sensitization Respiratory: Data not available or insufficient for classification.

Germ Cell Mutagenicity: In vitro and In vivo – Not Mutagenic

Carcinogenicity: Data not available or insufficient for classification.

Reproductive and/or Developmental Toxicity: Not classified for female or male reproduction in rats by inhalation (Test results- NOAEL 129 mg/l, exposure 1 generation). Not classified for development in rats by inhalation (Test results - NOAEL 307 mg/l, during gestation).

Single Dose Toxicity: In Dogs, not classified by inhalation on the nervous system or cardiac sensitization (Test results – LOAEL 913 mg/l, exposure 10 mins).

Repeated Dose Toxicity: In Rats, not classified by inhalation on bone, teeth, nails and/or hair (Test results – NOAEL 129 mg/l, exposure 11 weeks) or on liver, heart, skin, endocrine, immune, hematopoietic, nervous, respiratory systems, gastrointestinal tract, muscles, eyes, kidney, and/or bladder (Test results – NOAEL 155 mg/l, exposure 13 weeks). And in Rats, not classified by ingestion on liver, heart, endocrine, immune, hematopoietic, nervous, respiratory systems, eyes, kidney, and/or bladder (Test results – NOAEL 1000 mg/kg/day, exposure 28 days).

Aspiration Hazard: Data not available or insufficient for classification.

Methyl Nonafluoroisobutyl Ether

Acute Toxicity

Dermal: LD50 Estimated to be > 5,000 mg/kg

Ingestion: LD50 > 5,000 mg/kg, Rat

Inhalation: LC50 > 1,000 mg/l, 4 h, Rat

Skin Corrosion/Irritation: No significant irritation in Rabbits.
Serious Eye Damage/Irritation: No significant irritation in Rabbits.
Sensitization Skin: Not sensitizing in Guinea pigs.
Sensitization Respiratory: Data not available or insufficient for classification.
Germ Cell Mutagenicity: In vitro and In vivo – Not Mutagenic
Carcinogenicity: Data not available or insufficient for classification.
Reproductive and/or Developmental Toxicity: Not classified for female or male reproduction in rats by inhalation (Test results- NOAEL 129 mg/l, exposure 1 generation). Not classified for development in rats by inhalation (Test results - NOAEL 307 mg/l, during gestation).
Single Dose Toxicity: In Dogs, not classified by inhalation on the nervous system or cardiac sensitization (Test results – LOAEL 913 mg/l, exposure 10 mins).
Repeated Dose Toxicity: In Rats, not classified by inhalation on bone, teeth, nails and/or hair (Test results – NOAEL 129 mg/l, exposure 11 weeks) or on liver, heart, skin, endocrine, immune, hematopoietic, nervous, respiratory systems, gastrointestinal tract, muscles, eyes, kidney, and/or bladder (Test results – NOAEL 155 mg/l, exposure 13 weeks). And in Rats, not classified by ingestion on liver, heart, endocrine, immune, hematopoietic, nervous, respiratory systems, eyes, kidney, and/or bladder (Test results – NOAEL 1000 mg/kg/day, exposure 28 days).
Aspiration Hazard: Data not available or insufficient for 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: In vitro and In vivo – Not Mutagenic
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 by inhalation.
Aspiration toxicity: Not classified based on available information.

12. ECOLOGICAL INFORMATION

Trans-1,2-Dichloroethylene

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

13. DISPOSAL CONSIDERATIONS

Dispose of contents/ container in accordance with the local/regional/national/international regulations. Remove to a permitted waste disposal facility. Do not puncture or incinerate cans. Empty aerosol cans before disposal.

14. TRANSPORT INFORMATION

U.S. DOT

Limited Quantity

IATA

Proper Shipping Name: Aerosols, Non-Flammable

Hazard Class: 2.2

Identification No. UN1950

Packing Group: None

IMDG

Proper Shipping Name: Aerosols, Non-Flammable

Hazard Class: 2.2

Identification No. UN1950

Packing Group: None

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA: All ingredients are listed in TSCA inventory

16. OTHER INFORMATION

NPCA-HMIS Ratings:

Health - 2

Flammability - 1

Reactivity - 0

Personal Protective rating to be supplied by user depending on the condition

FOR INDUSTRIAL USE ONLY

REVISION DATE: JANUARY 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.