



1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-143XD-2.5
PTFE Release Agent/Dry Lubricant

Product Use: Release Agent or Dry 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

GHS classification in accordance with 29 CFR 1910.1200
Not a hazardous substance or mixture.

GHS label elements:
Not a hazardous substance or mixture.

Other hazards which do not result in classification or are not covered by GHS
Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects.
The thermal decomposition vapors of fluorinated plastics may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.
Rapid evaporation of the product may cause frostbite.

3. INGREDIENTS

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
1,1,1,2,2,3,4,5,5-Decafluoropentane	138495-42-8	97-99

Hazardous ingredients
No hazardous ingredients. This product does not contain any components that require disclosure according to OSHA Hazard Communication Standard 2012.

4. FIRST AID MEASURES

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

Eye: Flush with a large amount of water, lifting eyelids until no evidence of the chemical remains. Get medical attention if necessary.

Skin: Wash skin with soap and water after contact. Get medical attention if necessary.

Oral: If swallowed, Do NOT induce vomiting. Rinse mouth thoroughly with water. Get medical attention.

Note to physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flash Point: Does not flash

Method: TCC

Suitable extinguishing media: Water spray, Alcohol-resistant foam, Carbon Dioxide (CO₂), Dry chemical.

Unsuitable extinguishing media: None known.

Specific hazards during fire-fighting: Containers may rupture under fire conditions. Decomposition may occur (see section 10).

Special Fire Fighting Instruction: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool containers. Evacuate personnel to safe area. Self-contained breathing apparatus (SCBA) maybe required if a large amount of material is spilled under fire conditions. Fight fire from a distance, heat may rupture containers.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up. Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus.

Environmental precautions:

Avoid release into the environment. Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Local or national regulations may apply to releases and disposal of this material, as well as those materials and items used in the cleanup of releases.

7. HANDLING AND STORAGE

Handling: 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. Where ventilation is inadequate, use appropriate respiratory protection. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling. Do not store or consume food, drink, or tobacco in areas where they may become contaminated with this material.

Storage Conditions: Store in a well-ventilated place and keep container tightly closed. Keep away from strong oxidizing agents. Do not allow stored product to exceed 52°C (125°F) to prevent leakage or potential rupture of container from pressure and expansion. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Avoid breathing vapors, mists or spray. Use with mechanical ventilation in enclosed or low places. If necessary to keep exposure limits below permissible limits, use NIOSH approved respirators. In poorly ventilated areas, or if a large amount is released, 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 impervious should be used when handling liquid.

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: 131°F/55°C Approx.

Percent Volatile by Volume: 97.5%

Density: 1.6 g/cc at 68°F/20°C

Vapor Pressure: 226 mm Hg at 77°F/25°C

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

Solubility in H₂O : Insoluble

pH Information: Neutral

Evaporation Rate (CC14=1): >1

Form: Liquid

Appearance: Milky

Color: White

Odor: Faint Ethereal Odor

10. STABILITY AND REACTIVITY

Stability: Stable at normal temperatures and storage conditions.

Material and Conditions to Avoid: Oxidizing agents.

Decomposition: This product can be decomposed at high temperatures (flame, glowing metal surfaces, etc.) forming Hydrofluoric acid, Carbonyl difluoride, Carbon dioxide (CO₂), Carbon monoxide.

Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity: None of the components in this product are listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

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.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity:

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).

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.

1,1,1,2,2,3,3,4,5,5,5-Decafluoropentane (CAS# 138495-42-8) is controlled by TSCA Section 5, Significant New Use Rule (SNUR; 40 CFR 721.5645) The approved uses are: precision and general cleaning, carrier fluid, displacement drying, printed circuit board cleaning, particulate removal and film cleaning, process medium, heat transfer fluid (dielectric and non-dielectric), and test fluid. Processors and users of this substance must also comply with the applicable general SNUR requirements set forth in 40 CFR 721 subpart A, including export notification requirements if applicable (40 CFR 721.20), and the applicable record keeping requirements set forth at 40 CFR 721.125.

16. OTHER INFORMATION

NPCA-HMIS Ratings:

Health - 1
Flammability - 0
Reactivity - 0

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

FOR INDUSTRIAL USE ONLY

REVISION DATE: JUNE 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.