



**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**  
The thermal decomposition vapors of fluorinated plastics may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

**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	97 – 98

**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. Get medical attention if irritation develops and persists.

**Skin:** Wash skin with soap and water after contact. Get medical attention if symptoms occur.

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

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 (CO<sub>2</sub>), Dry chemical.

**Unsuitable extinguishing media:** None known.

**Specific hazards during fire-fighting:** Exposure to combustion products may be a hazard to health.

**Hazardous combustion products:** Hydrogen fluoride, carbonyl fluoride, Carbon oxides, potentially toxic fluorinated compounds, aerosolized particulates.

**Specific extinguishing methods:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from the fire area if it is safe to do so. Evacuate area.

**Special protective equipment for fire-fighters:** Self-contained breathing apparatus (SCBA) maybe required if necessary. Use personal protective equipment.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Follow safe handling advice and personal protective Equipment recommendations.

**Environmental precautions:** Discharge into the environment must be avoided. Prevent further leakage or spillage to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

**Methods and materials for containment and cleaning up:** Soak up with inert absorbent material. For large spills, provide diking and other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 provide information regarding certain local or national requirements.

## 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, 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. 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** General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. 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 impervious should be used when handling liquid. Wash skin after contact.

**Hygiene measures:** Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Wash contaminated clothing before re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** 131°F/55°C Approx.

**Percent Volatile by Volume:** 97 - 98%

**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 H<sub>2</sub>O :** Insoluble

**pH Information:** Neutral

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

**Form:** Liquid

**Appearance:** Milky

**Color:** White

**Odor:** Faint Ethereal Odor

## 10. STABILITY AND REACTIVITY

**Stability:** Stable at normal temperatures and storage conditions.

**Incompatible Materials and Conditions to Avoid:** None known.

**Possibility of hazardous reactions:** Reacts with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.

**Hazardous Decomposition Products:** Hydrofluoric acid, Carbonyl difluoride, Carbon dioxide, and Carbon monoxide.

## 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.

## 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).

## 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) 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. 1,1,1,2,2,3,4,5,5,5-Decafluoropentane (CAS# 138495-42-8) requires export notification under TSCA Section 12(b) and 40 CFR Part 707 Subpart D.

**SARA 304 Extremely Hazardous Substances Reportable Quantity:** This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity:** This material does not contain any components with a section 302 EHS RQ.

**SARA 311/312 Hazards:** No SARA Hazards

**SARA 313 Regulated Chemicals:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**California Proposition 65:** This product does not contain chemicals known to the State of California to cause cancer and/or birth defects or any other reproductive defects.

## 16. OTHER INFORMATION

### NPCA-HMIS Ratings:

Health - 0  
Flammability - 0  
Reactivity - 0

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

### FOR INDUSTRIAL USE ONLY

### REVISION DATE: JULY 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.