



## 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

**Name:** MS-143HN-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

### **Hazard classification**

Serious Eye Damage/Eye Irritation: Category 2A  
Specific Target Organ Toxicity (single exposure): Category 3

### **Label elements:**

#### **Signal word**

Warning

#### **Pictograms**



### **Hazard Statements**

Causes serious eye irritation.  
May cause drowsiness or dizziness

### **Precautionary Statements**

Avoid breathing mist/vapors/spray.  
Use only outdoors or in a well-ventilated area.  
Wash skin thoroughly after handling.  
IF INHALED: Remove person to fresh air and keep 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.  
Store in a well-ventilated place. Keep container tightly closed.  
Dispose of contents/ container to an approved waste disposal plant.

### Other Hazards

The thermal decomposition vapors of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco. Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Prolong skin contact may cause dermatitis or frostbite. 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	40 – 50
Isopropyl Alcohol	67-63-0	15 – 20
Trans,1.2-Dichloroethylene	156-60-5	30 – 36

### 4. FIRST AID MEASURES

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

**Eye:** Flush with large amounts of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if necessary.

**Skin:** Wash with water for at least 15 minutes. Remove contaminated clothing. Wash contaminated clothing before reuse. Get medical attention if necessary.

**Oral:** If swallowed, DO NOT induce vomiting unless directed to do so by a physician, because the hazard of aspirating the material into the lungs is considered greater than swallowing it. Never give anything to an unconscious person. Get medical attention.

**Most important symptoms/effects, acute and delayed:** The thermal decomposition vapors of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco. Eye contact may provoke the following symptoms: Irritation Causes serious eye irritation. May cause drowsiness or dizziness.

### 5. FIRE FIGHTING MEASURES

**Flash point:** None (TCC)

**Suitable Extinguishing Media:** Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>)

**Unsuitable extinguishing media:** No applicable data available.

**Special hazards:** Exposure to combustion products may be hazardous to health. Hazardous combustion products: Hydrogen fluoride, Carbonyl fluoride, Carbon oxides, Chlorine compounds.

**Special Fire Fighting Instruction:** In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment

**Further information:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Evacuate personnel to safe areas. Cool containers with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

## 6. ACCIDENTAL RELEASE MEASURES

Evacuate personnel, ventilate area with fresh air, if a large amount is accidentally released, use self-contained breathing apparatus. Dike spill. Prevent material from entering sewers, waterways or low areas. Soak up with sand, vermiculite or other noncombustible absorbent materials.

## 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. Use appropriate respiratory protection, when ventilation is inadequate. Avoid contact with skin or eyes. Wash thoroughly after handling. When using do not eat, drink, or smoke.

**Storage Conditions:** Store in a well-ventilated place and keep container tightly closed. Keep away from heat, sparks and flames. Do not allow stored product to exceed 52°C (125°F) to prevent leakage or potential rupture of container from pressure and expansion.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Limits:

1,1,1,2,2,3,4,5,5,5-Decafluoropentane  
Isopropyl Alcohol  
Trans,1,2-Dichloroethylene

### TLV (ACGIH)

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

### PEL (OSHA)

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

**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 to this material when prolonged or frequently repeated contact occurs. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often.

**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:** 100 °F/37.7°C

**Percent Volatile by Volume:** 95%

**Density:** 1.34 g/cc at 77°F/25°C

**Vapor Pressure:** 481 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.

**Material and Conditions to Avoid:** Oxidizing agent. Heat, flames, sparks. Extreme temperatures and direct sunlight.

**Decomposition:** Carbon oxides, Hydrofluoric acid, Carbonyl difluoride

**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.

### **Isopropyl Alcohol**

**Acute Oral Toxicity:** LD50, Rat: > 5,000mg/kg

**Acute Inhalation Toxicity:** 6 hour, LC50, Rat: > 25mg/l (vapor)

**Acute Dermal Toxicity:** LD50, Rabbit: > 5,000 mg/kg

**Skin Corrosion/Irritation:** No skin irritation in rabbits

**Serious Eye Irritation/ Eye Irritation:** Eye irritation, in rabbits. Reversing in 21 days.

**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:** May cause drowsiness and dizziness.

**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 Guidelin 403

**Skin Corrosion/Irritation:** Mild skin irritation in rabbits

**Serious Eye Irritaion/ 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.

## **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).

### **Isopropyl Alcohol**

**Ecotoxicity:** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Toxic to Fish:** 96 hour, LC50 in Fathead minnow (*Pimephales promelas*): 9640 mg/l

**Toxic to daphnia and other aquatic invertebrates:** 24 hour, EC50 Water flea (*Daphnia magna*): >10,000 mg/l

**Toxic to microorganisms:** 16 hour, EC50 (*Pseudomonas putida*): >1,050 mg/l

**Persistence and degradability:** Rapidly degradable

**Bioaccumulative potential:** Partition coefficient n-octanol/ water (log Pow): 0.05

**Mobility in soil:** No data available.

### **Trans-1,2-Dichloroethylene**

96 hour LC50 in *Lepomis marochirus* (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

### 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. Also, this product requires an export notification under TSCA Section 12(b) and 40 CFR Part 707 Subpart D.

#### **U.S. State Regulations**

##### **California Prop. 65**

**WARNING:** This product can expose you to chemicals including 2,2'-Iminodiethanol, which is/are known to the State of California to cause cancer, and pentadecafluorooctanoic acid, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### 16. OTHER INFORMATION

#### **NPCA-HMIS Ratings:**

Health	- 1
Flammability	- 1
Reactivity	- 1

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

#### **FOR INDUSTRIAL USE ONLY**

**REVISION DATE: AUGUST 2019**

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.