



## 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

**Name:** MS-122XDL  
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:** Gases under pressure – Liquefied Gas

### **Label elements:**



**Single Word:** Warning

### **Hazard Statements**

Contains gas under pressure; may explode if heated.  
May displace oxygen and cause rapid suffocation.

### **Precautionary Statements:**

Pressurized container. Do not pierce or burn, even after use.  
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.  
Dispose of contents/container to an approved waste disposal plant.

### **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.  
The thermal decomposition vapors of fluorinated polymers 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> |
|---------------------------------------|----------------|----------------------|
| Trans-1,3,3,3-Tetrafluoroprop-1-ene   | 29118-24-9     | 85 - 90              |
| 1,1,1,2,2,3,4,5,5,5-Decafluoropentane | 138495-42-8    | 10 - 15              |

### 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 a large amount of water for at least 15 minutes, lifting eyelids until no evidence of the chemical remains. Get medical attention if necessary.

**Skin:** Wash skin with water after contact. Wash contaminated clothing before use. Get medical attention if necessary.

**Oral:** If swallowed, Do NOT induce vomiting. Rinse mouth with plenty of water. Never give anything to an unconscious person. Call a physician.

**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

**Fire and Explosion:** Aerosols may rupture under fire conditions. Decomposition may occur.

**Extinguishing Media:** As appropriate for surrounding area.

**Hazardous decomposition products:** In case of fire, forming toxic gases along with Hydrogen fluoride, Carbonyl fluoride, Carbon dioxide (CO<sub>2</sub>), Carbon monoxide.

**Special Fire Fighting Instruction:** Self-contained breathing apparatus (SCBA) maybe required if a large amount of aerosols rupture under fire conditions. Evacuate personnel to safe area. Fight fire from a distance, heat may rupture containers.

### 6. ACCIDENTAL RELEASE MEASURES

Ventilate area with fresh air, if a large amount is accidental released and wear self-contained breathing apparatus. No need for additional release information, since it is an aerosol.

## 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 or eyes. 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:** Keep away from strong oxidizing agents. 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>TLV (ACGIH)</u> | <u>PEL (OSHA)</u> |
|---------------------------------------|--------------------|-------------------|
| Trans-1,3,3,3-Tetrafluoroprop-1-ene   | Not Established    | Not Established   |
| 1,1,1,2,2,3,4,5,5,5-Decafluoropentane | Not Established    | Not Established   |

**Respiratory Protection:** Avoid breathing vapors, mists or spray. Use with mechanical ventilation especially for enclosed or low places. Local exhaust should be used when a large amount is released. If necessary to keep exposure limits below permissible limits, use NIOSH approved respirators. In poorly ventilated areas, 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 to this material when prolonged or frequently repeated contact occurs.

**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

|  |   |
|--|---|
| <b>Boiling Point:</b> Not Applicable   | <b>Percent Volatile by Volume:</b> 99%          |
| <b>Density:</b> 1.25 g/cc at 77°F/25°C | <b>Vapor Pressure:</b> 56 psi at 77°F/25°C      |
| <b>Vapor Density (Air=1):</b> >1       | <b>Solubility in H<sub>2</sub>O :</b> Insoluble |
| <b>pH Information:</b> Neutral         | <b>Evaporation Rate (CC14=1):</b> >1            |
| <b>Form:</b> Aerosol                   | <b>Appearance:</b> Milky                        |
| <b>Color:</b> White                    | <b>Odor:</b> Faint Ethereal Odor                |

## 10. STABILITY AND REACTIVITY

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

**Material and Conditions to Avoid** Incompatible with alkali metals and strong oxidizing agents.

**Decomposition:** This product can be decomposed by high temperatures (flame, glowing metal surfaces, etc.) forming Fluorocarbons, Hydrogen fluoride, hazardous gases including Carbon monoxide and Carbon dioxide.

**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.

### **Trans-1,3,3,3-Tetrafluoroprop-1-ene**

**Inhalation:**

4 hour, LC50 rat: >207000 ppm

**Skin irritation:** No skin irritation in rabbits. Method: OECD Test Guideline 404

Method: OECD Test Guideline 404

**Eye irritation** No data available

**Sensitization:** Cardiac sensitization

Species: Dogs

Result: Did not cause sensitization on laboratory animals

**Repeated dose toxicity:**

13 Weeks, Inhalation, rat: Causes mild effects on the heart. NOEL 5,000 ppm

**Genotoxicity in vitro and in vivo:** In vitro tests did not show mutagenic effects.

**Reproductive toxicity:** Test Method: Two-generation study

Species: Rat. Application Route: Inhalation. NOEL: >20,000 ppm; NOEL: >20,000 ppm.

Method: OECD Test Guideline 416

**Teratogenicity:** Species: Rabbit & Rat. Method: OECD 416. Did not show teratogenic effects in animal experiments.

Species: Rat. Application Route: Inhalation. NOAEC: 15,000 ppm. Method: OECD Test Guideline 414.

### **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

### Trans-1,3,3,3-Tetrafluoroprop-1-ene

**Ecotoxicity effects:**

96 hour NOEC – Cyprinus carpio (Carp): > 117 mg/L

48 hour EC50 – Daphnia magna (Water flea): > 160 mg/L

Toxicity to algae: Growth inhibition: NOEC: > 170 mg/l, Exposure time: 72 h

**Biodegradability:** Aerobic: Not readily biodegradable

### 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. Do not puncture or incinerate cans. Empty aerosol cans before disposal.

## 14. TRANSPORT INFORMATION

### U.S. DOT

**Proper Shipping Name:** Consumer Commodity

**Hazard Class:** ORM-D

**Identification No.** None

**Packing Group:** None

### 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.

#### SARA/TITLE III HAZARD CATEGORIES:

##### Product Hazard Categories:

|                   |       |
|-------------------|-------|
| Acute Health      | - Yes |
| Chronic Health    | - No  |
| Fire Hazard       | - No  |
| Reactivity Hazard | - No  |
| Pressure Hazard   | - Yes |

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. 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: APRIL 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.