



## 1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

**Name:** MS-122AVL  
DPMS-N0805A-1  
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

**Physical Hazard:** Gases under pressure – Liquefied Gas

**Label elements:**



**Single Word:** Warning

### **Hazard Statements**

Contains gas under pressure; may explode if heated.

### **Precautionary Statements:**

Avoid breathing spray.  
Wash skin thoroughly after handling.  
Use in a well-ventilated area.  
In case of EYE contact, immediately flush eyes with plenty of water.  
If eye irritation persists: Get medical attention.  
IF ON SKIN: Remove/Take off all contaminated clothing, immediately. Rinse skin with water.  
If INHALED: Remove victim to fresh air.  
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F  
Pressurized container. Do not pierce or burn, even after use.

### **Hazardous prevention measures:**

Avoid release to the environment.  
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.

May cause cardiac arrhythmia.

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

Repeated episodes of polymer fume fever may result in persistent lung effects.

**3. INGREDIENTS**

<u>Material (s)</u>	<u>CAS No.</u>	<u>Approximate %</u>
Trans-1,3,3,3-Tetrafluoroprop-1-ene (HFO-1234ze)	29118-24-9	88 - 92
Isopropyl Alcohol	67-63-0	5 - 10

**4. FIRST AID MEASURES**

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

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

**Oral:** DO NOT induce vomiting, unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Call a physician.

If vomiting occurs naturally, have a victim lean forward to reduce the risk of aspiration.

**5. FIRE FIGHTING MEASURES**

**Specific hazards:** This product is not flammable.

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

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

**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. Polytetrafluoroethylene should not be handled around tobacco products because, smoking contaminated tobacco products may cause polymer fume fever.

**Storage Conditions:** 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>	<u>WEEL (AIHA)</u>
HFO-1234ze	Not Established	Not Established	800 ppm (TWA)
Isopropyl Alcohol	200 ppm , TWA	400 ppm, 8 Hr. TWA	

**Respiratory Protection:** Avoid breathing vapors, mists or spray. Use with mechanical ventilation especially for enclosed or low places. Local exhaust should be used when large amounts are 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 hands thoroughly after contact.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Boiling Point:** Not Applicable

**Percent Volatile by Volume:** 99%

**Density:** 1.2 g/cc at 77°F/25°C

**Vapor Pressure:** 80 psig at 77°F/25°C

**Vapor Density (Air=1):** >1

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

**pH Information:** Neutral

**Evaporation Rate (CC14=1):** >1

**Form:** Aerosol

**Appearance:** Milky

**Color:** White

**Odor:** Faint Ethereal Odor

## 10. STABILITY AND REACTIVITY

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

**Material and Conditions to Avoid** Avoid heat, sparks and flame. Strong oxidizers, strong acids, reactive metals, halogenated compounds, aldehydes, strong bases, alkali metals, alkaline earth metals.

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

**Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Animal Data

#### HFO-1234ze

**Skin:** Rabbit testing indicates this material is not a skin irritant.

**Inhalation:** Acute (4-Hour) Inhalation Toxicity Screening Study (mouse): No Lethality at >100,000ppm  
4 hour, LC50 rat: >207,000ppm

Repeated exposure in rats over 13 weeks caused mild effects on the heart. NOEL 5,000ppm.

**Genotoxicity:** Results of chromosome aberration test in vitro in human lymphocytes were negative. Ames test results: negative  
Mutagenicity in vivo mammalian (mouse) bone-marrow cytogenetic test, chromosomal analysis results: negative.

### Isopropyl Alcohol

#### Acute Toxicity

**Ingestion:** LD50, Rat 4,700 - 5,800 mg/kg. Approximate. Lethal Dose, Human 100 ml

#### Skin Absorption

LD50, Rabbit 13,000 mg/kg

#### Inhalation

LC50, 8 h, Vapor, Rat, female 19,000 ppm

#### Sensitization Skin

Did not demonstrate the potential for contact allergy in mice.

#### Repeated Dose Toxicity

In animals, effects have been reported on the following organs: Liver. Kidney. Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans. Observations in animals include: Lethargy.

#### Chronic Toxicity and Carcinogenicity Inhalation:

Did not cause cancer in laboratory animals.

#### Developmental Toxicity

Isopropanol has been toxic to the fetus in laboratory animals at doses toxic to the mother.

#### Reproductive Toxicity

In animal studies, did not interfere with reproduction.

#### Genetic Toxicology

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

## 12. ECOLOGICAL INFORMATION

### **Aquatic Toxicity:**

#### **HFO-1234ze:**

48 hour EC50 – Daphnia magna: >160 mg/L  
96 hour NOEC – Cyprinus carpio (Carp): >117 mg/L  
72 hour NOEC- Algae growth inhibition; >170 mg/L

### **Isopropyl Alcohol**

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

#### **Fish Acute & Prolonged Toxicity**

LC50, fathead minnow (Pimephales promelas), flow-through, 96 h: 9,640 - 10,400 mg/l

#### **Aquatic Invertebrate Acute Toxicity**

EC50, water flea Daphnia magna, 48 h, immobilization: 7,550 - 13,299 mg/l

#### **Aquatic Plant Toxicity**

EC50, alga Scenedesmus sp., Growth rate inhibition, 72 h: > 1,000 mg/l

#### **Toxicity to Micro-organisms**

EC50; activated sludge, respiration inhibition: > 1,000 mg/l

## 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.

**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: AUGUST 2016**

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.