



1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

**Name:** MS-122AD  
DPMS-Z0918A  
PTFE Release Agent/Dry Lubricant

**Product Use:** Release Agent or Dry Lubricant

**MANUFACTURER/DISTRIBUTOR:**

Mark V Lab  
18 Kripes Rd.  
East Granby, CT 06026  
(203) 743-4447

**Emergency Phone Number:**  
(800) 424-9300

2. HAZARDS IDENTIFICATION

**GHS Label Elements:**

**Pictogram:** not required

**Precautionary Statements:** Pressurized container: Do not pierce or burn, even after use.  
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

**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>
1,1,1,2-Tetrafluoroethane	811-97-2	88 - 92
Isopropyl Alcohol	67-63-0	5 - 10
Poly-TFE, Omega-Hydro-Alpha-(Methylcyclohexyl)- 9002-84-0	65530-85-0	1 - 2 Poly-Tetrafluoroethylene
< 1		

#### **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:** If swallowed, **Do NOT** induce vomiting, because the hazard of aspirating the material into the lungs is considered greater than swallowing it. Immediately give 2 glasses of water. Never give anything 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.

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#### **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**

<b><u>Exposure Limits:</u></b>	<b><u>TLV (ACGIH)</u></b>	<b><u>PEL (OSHA)</u></b>	<b><u>AEL* (DuPont)</u></b>
1,1,1,2-Tetrafluoroethane	Not Established	Not Established	1000 ppm
Isopropyl Alcohol	200 ppm , TWA	400 ppm, 8 Hr. TWA	200ppm, 8 & 12Hr. TWA
Poly-Tetrafluoroethylene	Not Established	Not Established	10 mg/m3, 8 Hr. TWA, Total dust 5 mg/m3, 8 Hr. TWA, Respirable dust

\*AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**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 H2O :** Insoluble

**pH Information:** Neutral

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

**Form:** Aerosol

**Appearance:** Milky

**Color:** White

**Odor:** Faint Ethereal Odor

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## **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**

#### **1,1,1,2-Tetrafluoroethane**

##### **Inhalation:**

4 hour, LC50 rat: >500000 ppm

**Sensitization:** Cardiac sensitization

Species: Dogs

Note: No-observed-effect level 50 000 ppm Lowest observable effect level 75 000

**Repeated dose toxicity:** Species: rat

NOEL: 40000ppm

**Genotoxicity in vitro:** Note: In vitro tests did not show mutagenic effects

**Other Health Effects:** This substance has no evidence of carcinogenic properties

### **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.

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### **Poly-TFE, Omega-Hydro-Alpha-(Methylcyclohexyl)-**

**Oral:** ADL/rat: >17,000 mg/kg

**Skin irritation:** No skin irritation, guinea pig

**Eye irritation:** No eye irritation, rabbit

**Skin sensitization:** Did not cause sensitization on laboratory animals., guinea pig

## **Poly-Tetrafluoroethylene**

**Oral:** LD50/rat: >11,280 mg/kg

**Skin irritation:** No skin irritation, guinea pig

**Eye irritation:** No eye irritation, rabbit

**Skin sensitization:** Did not cause sensitization on laboratory animals., guinea pig

**Repeated dose toxicity:** Oral, rat

No toxicologically significant effects were found.

## **12. ECOLOGICAL INFORMATION**

### **Aquatic Toxicity:**

#### **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

## **1,1,1,2-Tetrafluoroethane**

**Ecotoxicity:** There is no data on the ecotoxicity of this product.

**Additional ecology information: Accumulation** in aquatic organisms is unlikely. The product contains greenhouse gases which may contribute to global warming.

## **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.

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## **14. TRANSPORT INFORMATION**

### **U.S. DOT**

**Proper Shipping Name:** Consumer Commodity  
None

**Hazard Class:** ORM-D

**Identification No.** None

**Packing Group:**

### **IATA**

**Proper Shipping Name:** Aerosol, Non-Flammable  
None

**Hazard Class:** 2.2

**Identification No.** UN1950

**Packing Group:**

