1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-122AD
DPMS-Z0918A
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.
May displace oxygen and cause rapid suffocation.

Precautionary Statements:
Avoid breathing mist/vapor/spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
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.
IF ON SKIN: Remove/Take off all contaminated clothing, immediately. Rinse skin with water.
IF INHALED: Remove victim to fresh air and keep at rest in position comfortable for breathing.
Protect from sunlight. Do not expose to temperature exceeding 50°C/122°F.
Do not spray on an open flame or ignition source.
Pressurized container. Do not pierce or burn, even after use.
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.
Repeated episodes of polymer fume fever may result in persistent lung effects.

3. INGREDIENTS

Material (s)	CAS No.	Approximate %
1,1,1,2-Tetrafluoroethane	811-97-2	90 - 95
Isopropyl Alcohol	67-63-0	5 - 10

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air. Get medical attention.

Eye: Immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Continue to rinse. Get medical attention.

Skin: Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before use. Thoroughly clean shoes before reuse. Get medical attention.

Oral: DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

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^{O}F/49^{O}C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits:	**TLV (ACGIH)**	**PEL (OSHA)**
1,1,1,2-Tetrafluoroethane	Not Established	Not Established
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

Density: 1.2 g/cc at 77^{O}F/25^{O}C

Vapor Density (Air=1): >1

pH Information: Neutral

Form: Aerosol

Color: White

Percent Volatile by Volume: 99%

Vapor Pressure: 80 psig at 77^{O}F/25^{O}C

Solubility in H_2O : Insoluble

Evaporation Rate (CC14=1): >1

Appearance: Milky

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

1,1,1,2-Tetrafluoroethane

Acute Inhalation:
4 hour, LC50 rat: >567000 ppm
Cardiac sensitization
Species: Dogs
Note: Lowest observed adverse effect concentration: 80000 ppm. Cardiac sensitisation threshold limit: 334,000 mg/m3.
Skin corrosion/irritation: No skin irritation in rabbits.
Serious eye damage/eye irritation: No eye irritation in rabbits.
Respiratory or skin 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.

Isopropyl Alcohol

Acute Toxicity
Ingestion: LD50, Rat 4,700 - 5,800 mg/kg.
Skin Absorption: LD50, Rabbit 13,000 mg/kg
Inhalation: LC50, Rat, 16,000 ppm
Skin Corrosion/Irritation: Mild skin irritation in rabbits.
Serious Eye Irritaion/ Eye Irritation: Eye irritation, 24 h, in rabbits.
Skin Sensitization: No data available
Respiratory Sensitization: No data available
Germ Cell Mutagenicity: No data available
Carcinogenicity: Not classified based on available information.
Reproductive toxicity: No data available
STOT-single exposure: Inhalation, Oral – May cause drowsiness and dizziness.
STOT-repeated exposure: No data available
Aspiration toxicity: No data available
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12. ECOLOGICAL INFORMATION

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.

Aquatic: Fish: 96 hour LC50 in Bluegill (Lepomis macrochirus): > 1400 mg/l
Persistence and degradability: No date is available on the degradability of this product.
Bioaccumulative potential: Partition coefficient n-octanol/ water (log Kow): 0.05
Mobility in soil: No data available.

1,1,1,2-Tetrafluoroethane

Toxicity to fish: 96 hour LC50 (Oncorhynchus mykiss (rainbow trout)): 450 mg/l
Toxicity to daphnia and other: 48 hour EC50 (Daphnia magna (Water flea)): 980 mg/l
Toxicity to algae: 96 hour ErC50 (algae): 142 mg/l
72 hour NOEC (Pseudokirchneriella subcapitata (green algae)): 13.2 mg/l
Biodegradability: Not readily biodegradable.
Bioaccumulative potential: Partition coefficient n-octanol/ water (log Pow): 1.06
Mobility in soil: No data available

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: NOVEMBER 2017