

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Name: MS-745
DPMS T0407A2
Vertrel X-Si

Product Use: Cleaning, Depositing or Swelling Silicone

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

Flammable Aerosols: Category 1

Label elements:

Signal word

Danger

Pictogram



Hazardous warnings

Extremely flammable aerosol

Precautionary Statements

Keep away from heat/sparks/open flames/hot surfaces and other ignition sources – No smoking.

Do not spray on an open flame or other ignition source.

Do not pierce or burn, even after use.

Wear protective gloves/eye protection/face protection.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Misuse or intentional inhalation abuse may lead to death without warning, due to cardiac effects. Rapid evaporation of the product may cause frostbite. Vapors may form flammable mixture with air.

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
1,1,1,2-Tetrafluoroethane	811-97-2	18 - 22

4. FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Eye: Flush with water as a precaution. Get medical attention if irritation develops and persists.

Skin: Flush skin with water. Remove contaminated clothing and shoes. Wash contaminated clothing before use. Get medical attention if necessary.

Oral: DO NOT induce vomiting without medical advice. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed: May cause cardiac arrhythmia.

Skin contact may provoke the following symptoms: Irritation, Discomfort, Pain, Redness, Rash, Itching, Swelling of tissue
Prolonged skin contact may defat the skin and produce dermatitis.

Eye contact may provoke the following symptoms: Irritation, Pain, Tearing, Redness, Discomfort, Blurred vision.

Inhalation may provoke the following symptoms: Respiratory tract irritation, Cough, Discomfort

Adverse effects from repeated inhalation may include: Central nervous system effects, Kidney effects, Liver disorders, Blood effects

Effects of breathing high concentrations of vapor may include: Tiredness, Drowsiness, Central nervous system effects, Convulsions

Aspiration may cause pulmonary edema and pneumonitis.

Notes to Physician: Treat symptomatically and supportively. **Notes to Physician:** Because of possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with special caution

5. FIRE FIGHTING MEASURES

Flammability: This product is flammable.

Test Method: Ignition distance test and Enclosed space ignition test

Autoignition Temperature: Not Determined

Flammable Limits in Air, % by Vol.: LEL: 5.0
UEL: None

Suitable Extinguishing Media: Water spray, Water mist, Dry chemical, Carbon dioxide (CO2)

Unsuitable extinguishing media: High volume water jet.

Specific hazards during fire-fighting: Do not use a solid water stream as it may scatter the spread fire. Flash back possible over considerable distance. Vapors may form flammable mixture with air. Exposure to combustion products may be hazardous to health.

Hazardous combustion products: Hydrogen fluoride Carbonyl fluoride Carbon oxides Silicon oxides

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

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers/tanks with water spray. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Remove all sources of ignition. Evacuate personnel to safe area. Use personal protective equipment.

Environmental precautions: If containers rupture, prevent material from entering sewers, waterways, or low areas. Should not be released into the environment.

Spill Cleanup: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations

7. HANDLING AND STORAGE

Handling: Use in a well-ventilated area to avoid breathing vapors. Use only in an area with explosion-proof exhaust ventilation if advised by assessment of local exposure potential. Keep away from ignition sources. When using do not eat, drink, or smoke. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling.

Storage Conditions: Store in a clean, cool and dry area that is well-ventilated. Do not store sources of heat, in direct sunlight or where temperatures exceed 120°F/49°C. Do not pierce or burn, even after use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<u>Exposure Limits:</u>	<u>TLV(ACGIH)</u>	<u>PEL (OSHA)</u>
1,1,1,2,2,3,4,5,5,5-Decafluoropentane	Not Established	Not Established
1,1,1,2-Tetrafluoroethane	Not Established	Not Established

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 (eg. Viton) when prolonged or frequently repeated contact occurs. For special applications, we recommend clarifying the resistance to chemicals of the protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N.A.

Percent Volatile by Volume: 100

Density: 1.17 g/cc @ 77°F/25°C

Vapor Pressure: 135 mmHg @ 77°F/25°C

pH Information: Neutral

Solubility in H₂O: Slightly soluble

Form: Aerosol

Odor: Slight, ether-like

Color: Colorless

Appearance: Clear

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable if stored and applied as directed.

Possibility of hazardous reactions: Highly flammable liquid and vapor. Vapors may form flammable mixture with air. Can react with strong oxidizing agents.

Material and Conditions to Avoid: Heat, sparks, and flames. Oxidizing agents

Hazardous Decomposition Products: No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

1,1,1,2,2,3,4,5,5,5-Decafluoropentane

Information on likely routes of exposure: Inhalation, Skin contact, Ingestion, Eye contact

Acute Oral: LD50: > 5000 mg/kg in rats

Acute Inhalation (vapor): 4 hour LC50: 114 mg/l in rats

Acute Dermal: LD50: > 5000 mg/kg in rats

Skin Corrosion/Irritation: No skin irritation in rabbits.

Serious Eye Irritation/ Eye Irritation: No eye irritation in rabbits.

Skin Sensitization: No skin sensitization in Guinea pigs.

Respiratory Sensitization: Not classified based on available information.

Germ Cell Mutagenicity: Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity: Not classified based on available information.

Reproductive toxicity: Weight of evidence does not support classification as a germ cell mutagen.

STOT-single exposure: Not classified based on available information.

STOT-repeated exposure: No significant health effects observed in animals at concentrations of 1mg/l/6h/d or less.

Aspiration toxicity: Not classified based on available information.

12. ECOLOGICAL INFORMATION

1,1,1,2,2,3,4,5,5,5-Decafluoropentane

96 hour LC50 in Oncorhynchus mykiss (rainbow trout): 13.9 mg/l
96 hour LC50 in Pimephales promelas (fathead minnow): 27.2 mg/l
96 hour LC50 in Danio rerio (zebra fish): 13 mg/l
48 hour LC50 in Daphnia magna (Water flea): 11.7 mg/l
72 hour EC50 in Pseudokirchneriella subcapitata (Green algae): >120 mg/l
21 days NOEC in Daphnia magna (Water flea): 1.72 mg/l

Biodegradability: Not readily biodegradable.

Bioaccumulative potential: Bioaccumulation is unlikely.

Mobility in soil: No data available

13. DISPOSAL CONSIDERATIONS

If recycling is not practicable, dispose of in compliance with local regulations. Remove to a permitted waste disposal facility. Empty containers retain residue and can explode if exposed to heat and sources of ignition.

14. TRANSPORT INFORMATION

U.S. DOT

Limited Quantity

IATA

Proper Shipping Name: Aerosols, Flammable

Hazard Class: 2.1

Identification No. UN1950

Packing Group: None

IMDG

Proper Shipping Name: Aerosols, Flammable

Hazard Class: 2.1

Identification No. UN1950

Packing Group: None

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.

CERCLA Reportable Quantity: This material does not contain any components with a CERCLA RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity: This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity: This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Flammable aerosol

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313

16. OTHER INFORMATION

NPCA-HMIS Ratings:

Health	- 0
Flammability	- 3
Reactivity	- 0

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

FOR INDUSTRIAL USE ONLY

REVISION DATE: JULY 2022

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.