



Safety Data Sheet

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name: : TMC Solvent Cleaner for Krytox™
Other Common Names: : Perfluorinated solvent
Recommended Use: : Cleaning solvent for Krytox™ and other PFPE (perfluoropolyether) oils and greases.
Manufacturer: : TMC Industries Inc.
1423 Mill Ln.
Waconia, MN 55387
www.tmcindustries.com
Emergency Telephone: : +1 952-442-1140

SECTION 2. HAZARDS IDENTIFICATION

Classification : Non hazardous
Labeling : Symbol: None
Signal Word: None
Hazard Statement: Not hazardous
Precautionary Statements **Inhalation:** vapors are heavier than air and can cause asphyxiation by reducing oxygen levels. Effects of breathing high concentrations of vapors include tiredness, drowsiness, and convulsions.
Ingestion: No health effects are anticipated
Carcinogenicity : This material is not listed by IARC, NTP, or OSHA as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name: Perfluoro compounds, C5-18
CAS number 86508-42-1
Concentration: > 99%
Impurities and additives: None

SECTION 4. FIRST AID MEASURES

Eye contact:	Flush eyes with large amounts of water.
Skin contact:	Wash exposed area with soap and water.
Inhalation:	Vapors are heavier than air and can cause asphyxiation by reducing oxygen levels. Effects of breathing high concentrations of vapors include tiredness, drowsiness, and convulsions. If symptoms develop, move person to fresh air and ventilate the affected area.
Ingestion:	No first aid is anticipated.
Persistent symptoms:	If these first aid measures do not alleviate symptoms, seek medical assistance.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Material will not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
NFPA Hazard Classification:	Health: 3; Flammability: 0; Reactivity: 0; Special Hazards: None.
Health classification of 3:	Based on the material's high vapor pressure which may exclude oxygen, and on the material's potential to generate hydrogen fluoride when exposed to heat from a fire.
Specific Hazards:	In fire conditions, toxic decomposition products may be formed. Standard procedure for chemical fires.
Specific Firefighting Procedures:	No information available
Special protective Equipment for fire-fighters:	Wear self-contained breathing apparatus and protective suit.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental Precautions:	Contain spills such that they do not enter a body of water or enter the sewer.
Methods for Cleanup:	Collect liquid using absorbent materials or a wet/dry vacuum.
Personal Precautions:	Refer to protective measures listed in sections 7 and 8.

SECTION 7. HANDLING AND STORAGE

Technical measures/Precautions: Ventilate the spill area as the vapors may exclude oxygen. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

Precautions for safe Handling: No information available.

Storage Conditions: Store in a cool, well ventilated location. Keep containers closed to prevent contamination.

No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE PREVENTION MEASURES

Engineering Measures: In the event that the polymer is heated above 350 degrees Celsius (662 degrees Fahrenheit), local ventilation should be used to avoid exposure to fumes.

Control Parameters: No information available

Biological standards: No information available

Personal Protective Equipment

Respiratory Protection: No personal respiratory protective equipment normally required. In the case of hazardous fumes caused by overheating, wear self-contained breathing apparatus.

Hand Protection: No information available

Eye Protection: Safety glasses

Skin and body protection: No PPE is specified; however, avoid contact with skin, eyes and clothing. Preventive skin protection.

Hygiene measures: General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state/form	liquid
Odor, color	odorless, colorless
Auto-ignition temperature	N/A, will not burn
Flash point	N/A, will not burn
Flammable limits (LEL)	N/A, will not burn
Flammable limits (UEL)	N/A, will not burn
Boiling point	50 - 100°C
Vapor pressure	232 mm Hg at 25°C
Liquid density	1.7 g/ml
Relative vapor density	11.7 (air = 1) at 20°C
pH	7
Melting point	N/A
Solubility in water	< 5 ppm
Relative evaporation rate	> 1 (BuOAc = 1)
VOC's	exempt
Octanol/water partition coefficient, K_{ow}	N/A, insoluble in both materials
Viscosity	0.4 cSt at 25°C

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Possible hazardous reactions under specific conditions: No information available.

Conditions to avoid: Elevated temperature, > 200°C

Materials to avoid: Contact with alkali or alkaline earth metals

Hazardous polymerization: Will not occur

Hazardous decomposition products: Exposure to high temperature causes formation of hydrogen fluoride (HF)

Section 11: Toxicological Information

No data available.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity:	Data is not available.
Persistence and degradability:	Material will persist in the environment; it is not subject to biodegradation.
Bioaccumulation:	Material is not expected to accumulate.
Mobility in soil:	Material is volatile and is readily lost to the atmosphere. Material has low surface tension and will seep into groundwater.
Atmospheric fate:	Material is photochemically stable and will persist in the atmosphere.
Ozone depletion potential:	0
Global warming potential:	Approximately >5000 (100-yr ITH)

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods:	TMC Industries Inc. recommends that this material, and mixtures containing this material, be recycled by distillation rather than being disposed by conventional waste methods for chemicals. Contact your sales representative at TMC Industries Inc. for details. If recycling this material is not practical, then dispose of it according to applicable federal, state, and local regulations via a qualified chemical-waste-disposal agency. Some states have classified used material as a hazardous waste due to its persistence in the environment. Incineration is the recommended method of disposal.
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SECTION 14. TRANSPORT INFORMATION

This material is not classified as dangerous according to DOT regulations.

SECTION 15. REGULATORY INFORMATION

Material is not subject to EPCRA regulations.

Material is in compliance with TSCA, EINECS, Canadian Domestic Substances, Australian Inventory of Chemical Substances, and Japan's Chemical Substance Control Law.

SECTION 16. OTHER INFORMATION

This Safety Data Sheet may not conform to the OSHA Hazard Communication Standard as the material is not hazardous by OSHA standards. This information is provided as a service to our customers. Further information is available from TMC by contacting your sales representative.

This Safety Data Sheet was prepared by TMC Industries Inc. using published information, information from in-house testing, and recommendations based on our extensive experience with this material. The information provided herein is correct to the best of our knowledge at the date of its publication. This information is given only as guidance in the safe handling, use, storage, transportation, and disposal of the material and is not to be considered as a warranty or specification. Persons using or handling this material should read this SDS before coming into contact with the product. This product must be handled in a responsible, safe manner.

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