Safety Data Sheet
TMC FC-3283 Reclaim Specialty Fluid

Rev. January 4th, 2021

Section 1: Identification

Product	TMC FC-3283 Reclaim Specialty Fluid
Other common names	perfluorotripropylamine
Manufacturer	TMC Industries Inc. 1423 Mill Ln. Waconia, MN 55387
Phone	952-442-1140
Emergency phone	952-442-1140
Other contact information	Fax: 952-442-1160; email: sales@tmcindustries.com; website: www.tmcindustries.com
Recommended use	Heat-transfer fluid for electronics

Section 2: Hazard Identification

Emergency Overview	Vapors are heavier than air and can cause asphyxiation by reducing oxygen levels.
Potential Health Effects	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

Chemical name	perfluorotripropylamine
CAS number	338-83-0
Concentration	> 99%, combined isomers and homologs
Impurities and additives	Mixture contains a number of isomers and homologs.

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

Material will not burn.

NFPA Hazard Classification: Health: 3; Flammability: 1; Reactivity: 0; Special Hazards: None. The health classification of 3 is 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.

Section 6: Accidental Release Measures

Contain spills such that they do not enter a body of water or enter the sewer. Collect liquid using absorbent materials or a wet/dry vacuum. Ventilate the spill area as the vapors may exclude oxygen. Collected liquid or spill absorbent may be reclaimed to recover pure solvent. Contact TMC for details. Otherwise, dispose of spill materials per federal, state, and local regulations.

Section 7: Handling and Storage

Avoid breathing vapors while handling material and employ adequate ventilation. Store in a cool, well ventilated location. Keep containers closed.

Section 8: Exposure Controls / Personal Protection

Use with adequate local ventilation. Exposure limits have not been established for this material.

HMIS Hazard Classification: Health: 0; Flammability: 0; Reactivity: 0; Protection: None.

Section 9: Physical and Chemical Properties

Physical 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	128° C
Vapor pressure	11 mm Hg at 20°C
Liquid density	1.8 g/ml
Relative vapor density	18 (air = 1) at 20°C
pH	7
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	0.7 cSt at 25°C

Section 10: Stability and Reactivity

Stability	Stable
Materials and conditions to avoid	Elevated temperature, > 200°C; 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

Toxicology data is available from EPA's ACToR database:
http://actor.epa.gov/actor/GenericChemical?casrn=338-83-0

Data is also available from NIH's PubChem database:
http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=67645

Section 12: Ecological Information

Toxicity	Data is available from links listed in Section 11.
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 moderately volatile, and a fraction of the spill will be lost to the atmosphere. Material has low surface tension and will seep into groundwater.
Atmospheric fate	Material photochemically stable and will persist in the atmosphere for more than 1000 years.
Ozone depletion potential	0
Global warming potential	>5000 (100-yr ITH)

Section 13: Disposal Considerations

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.

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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