SAFETY DATA SHEET
TMC-45 Specialty Fluid

SECTION 1: IDENTIFICATION

1.1. Product identifier:

Trade name: TMC-45 Specialty Fluid

Product no.: 4500, 4500-B, 4500-2.2, 4500-10, 4500-50, 4500-550

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Relevant identified uses of the substance or mixture: Cleaning Agent, Solvent (for cleaning and degreasing)
Restricted to professional and industrial use.

Uses advised against : None known.

1.3. Details of the supplier of the safety data sheet:

Company and address:
TMC Industries, Inc.
1423 Mill Lane
Waconia, Minnesota 55387
USA
TF: +1 (800) 772-8179
www.tmcindustries.com

Contact person: Nick Hansen

E-mail: sales@tmcindustries.com

SDS date: 7/21/2026

SDS Version: 2.0

Date of previous version: 7/15/2026 (2.0)

1.4. Emergency telephone number:

VeolocityEHS 1-800-255-3924 within the US, Canada, Puerto Rico and the U.S. Virgin Islands. If outside those areas, call 1-813-248-0585 (Contract#: MIS8157133).

SECTION 2: HAZARD(S) IDENTIFICATION

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. Classification of the substance or mixture:

Eye Irrit. 2; H319, Causes serious eye irritation.
Acute Tox. 4; H332, Harmful if inhaled.
STOT SE 3; H336, May cause drowsiness or dizziness.

2.2. Label elements:

Hazard pictogram(s):



Signal word: Warning

Hazard statement(s):
Causes serious eye irritation. (H319)
Harmful if inhaled. (H332)
Harmful if inhaled. (H332)
May cause drowsiness or dizziness. (H336)

Precautionary statement(s):

General:	Not applicable.
Prevention:	Avoid breathing mist/vapour. (P261) Use only outdoors or in a well-ventilated area. (P271) Wear face protection/protective gloves/protective clothing. (P280)
Response:	IF INHALED: Remove person to fresh air and keep comfortable for breathing. (P304+P340) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Call a POISON CENTER/doctor if you feel unwell. (P312) If eye irritation persists: Get medical advice/attention. (P337+P313)
Storage:	Store in a well-ventilated place. Keep container tightly closed. (P403+P233)
Disposal:	Refer to manufacturer or supplier for information on recovery or recycling. (P502)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances:

Not applicable. This product is a mixture.

3.2. Mixtures:

Product/substance	Identifiers	% w/w	Classification	Note
1,2 trans-dichloroethylene	CAS No.: 156-60-5	>73%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H336	
Proprietary Fluorinated Compound #1	CAS No.: Confidential	15-25%	STOT SE 3, H336	
Proprietary Fluorinated Compound #2	CAS No.: Confidential	10-15%	STOT SE 3, H336 , In use may form flammable/explosive vapour-air mixture	

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information:

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SECTION 4: FIRST-AID MEASURES

4.1. Description of first aid measures:

General information:	If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
Inhalation:	Upon breathing difficulties or irritation of the respiratory tract: Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth

	resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.
Skin contact:	Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.
Eye contact:	If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.
Ingestion:	If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.
Burns:	Not applicable.

4.2. Most important symptoms and effects, both acute and delayed:
Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.
Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

4.3. Indication of any immediate medical attention and special treatment needed:
If eye irritation persists: Get medical advice/attention.

Information to medics:
Bring this safety data sheet or the label from this product.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media:
Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture:
Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Halogenated compounds
Carbon oxides (CO / CO2)

5.3. Advice for firefighters:
Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:
Ensure adequate ventilation, especially in confined areas.

Avoid inhalation of vapours from spilled material.
Contaminated areas may be slippery.

6.2. Environmental precautions:
Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up:
Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections:
See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling:
Avoid contact during pregnancy and while nursing.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities:
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material:	Metal Container. Glass Container
Storage conditions:	Keep container closed when not in use. Store in a cool, dry place out of direct sunlight Do not freeze. Store between 0 - 32°C.
Incompatible materials:	Polystyrene Polyphenylene Oxide (PPO) Polycarbonate ABS Epichlorohydrin Silicone Natural Rubber Acrylic

7.3. Specific end use(s):
This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:
No substances are listed with a permissible exposure limit (ref: 29 CFR 1910.1000 TABLE Z-1)
No substances are listed with a permissible exposure limit CIB 66 [NIOSH 2014-100]

8.2. Exposure controls:
Apply general control to prevent unnecessary exposure

General recommendations:	Smoking, drinking and consumption of food is not allowed in the work area.
Exposure scenarios:	There are no exposure scenarios implemented for this product.
Exposure limits:	Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures: Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures: In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

Measures to avoid environmental exposure: No specific requirements.

Individual protection measures, such as personal protective equipment:

Generally: Use only protective equipment with a recognized certification mark, e.g. the UL mark.

Respiratory Equipment:

Work situation	Type	Class	Colour	Standards	
Under normal use conditions.	Positive pressure supplied air respirator.				

Skin protection:

Recommended	Type/Category	Standards	
Use proper protective clothing	Use proper protective clothing		

Hand protection:

Work situation	Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Under normal use conditions.	Viton				

Eye protection:

Work situation	Type	Standards	
Under Normal Use Conditions.	Face shield alternatively safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Physical state: Liquid

Color: Colorless

Odor: Characteristic

Odor threshold (ppm): No data available

pH: No data available

Density (g/cm^3): No data available

Relative density: No data available

Kinematic viscosity: No data available

Particle characteristics: No data available

Phase changes:

Melting point/freezing point (°F): No data available

Softening point/range (°F): Does not apply to liquids.

Boiling point (°F): 113.9

Boiling point (°C):	45.5
Vapor pressure:	No data available
Relative vapor density:	No data available
Decomposition temperature (°F):	No data available

Data on fire and explosion hazards:

Flash point (°F):	No flash point
Flash point (°C):	Test method: ASTM 56
Flammability (°F):	Not flammable
Auto-ignition temperature (°F):	No data available
Explosion limits (% v/v):	9.7 - 12.8

Solubility:

Solubility in water:	No data available
n-octanol/water coefficient (LogKow):	No data available
Solubility in fat (g/L):	No data available

9.2. Other information:

Thermal stability:	Stable under normal conditions and recommended use.
Evaporation rate (n-butylacetate = 100):	No data available
Other physical and chemical parameters:	No data available.
Oxidizing properties:	Will not oxidize.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:
No data available.

10.2. Chemical stability:
The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions, including those associated with foreseeable emergencies:
None known.

10.4. Conditions to avoid:
Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.
Sparks, open flames, static discharges.
Avoid flames and other heat sources. Will decompose when exposed to extreme elevated temperatures.

10.5. Incompatible materials:
Steam, oxidizers, caustic soda, caustic potash. Shock sensitive compounds may be formed.

10.6. Hazardous decomposition products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity:

Product/substance	1,2 trans-dichloroethylene
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	1235 mg/kg

Product/substance	1,2 trans-dichloroethylene
Species:	Mouse
Route of exposure:	Oral
Test:	LD50
Result:	2122 mg/kg

Product/substance	1,2 trans-dichloroethylene
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50
Result:	24100 ppm

Product/substance	1,2 trans-dichloroethylene
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	>5000 mg/kg

Harmful if inhaled.
Harmful if inhaled.

Skin corrosion/irritation:

Product/substance	1,2 trans-dichloroethylene
Species:	Rabbit
Result:	Adverse effect observed (Irritating)

Based on available data, the classification criteria are not met.

Serious eye damage/irritation:

Product/substance	1,2 trans-dichloroethylene
Species:	Rabbit
Result:	Adverse effect observed (Irritating)

Causes serious eye irritation.

Respiratory sensitisation:

Based on available data, the classification criteria are not met.

Skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Product/substance	1,2 trans-dichloroethylene
Conclusion:	Not Classified

Based on available data, the classification criteria are not met.

Carcinogenicity:

Product/substance	1,2 trans-dichloroethylene
Conclusion:	Not Classified

Based on available data, the classification criteria are not met.

Reproductive toxicity:
Based on available data, the classification criteria are not met.

STOT-single exposure:
May cause drowsiness or dizziness.

STOT-repeated exposure:
Based on available data, the classification criteria are not met.

Aspiration hazard:
Based on available data, the classification criteria are not met.

Long term effects:
Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure. Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Other information:
None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:
Based on available data, the classification criteria are not met.

12.2. Persistence and degradability:
Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential:
Based on available data, the classification criteria are not met.

12.4. Mobility in soil:
No data available.

12.5. Results of PBT and vPvB assessment:
This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other adverse effects:
None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods:
This material can be reclaimed by the manufacturer if required or disposed of at an approved facility according to local regulations.

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261):
1,2 trans-dichloroethylene is listed with EPA Hazardous Waste Number: U079

Specific labelling:

Contaminated packing:

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
DOT	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group
** Environmental hazards

Additional information:
Not dangerous goods according to DOT, IATA and IMDG.

14.6. Special precautions for user:
Not applicable.

14.7. Transport in bulk according to IMO instruments:
No data available.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

15.2. U.S. Federal regulations:

TSCA (the non-confidential portion): 1,2 trans-dichloroethylene is listed

Clean Air Act: None of the components are listed

EPCRA Section 302: None of the components are listed

EPCRA Section 304: None of the components are listed

EPCRA section 313: None of the components are listed

CERCLA: 1,2 trans-dichloroethylene is regulated with a Reportable Quantity (RQ) of: 1000 pounds

Hazardous chemical inventory reporting:

15.3. State regulations:

California / Prop. 65: None of the components are listed

Massachusetts / Right To Know Act: 1,2 trans-dichloroethylene is listed

New Jersey / Right To Know Act: None of the components are listed

New York / Right To Know Act: 1,2 trans-dichloroethylene is listed
1,2 trans-dichloroethylene is regulated with a Treshold Reporting Quantity (TRQ) of: 10 pounds

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Pennsylvania / Right To Know Act: 1,2 trans-dichloroethylene is listed
1,2 trans-dichloroethylene is hazardous to the environment (E)

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NFPA: Health hazard: 2
Fire hazard: 1

Instability hazard: 0
Specific hazard: None

15.4. Restrictions for application:
Restricted to professional users.
Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.5. Demands for specific education:
No specific requirements.

15.6. Additional information:
Not applicable.

15.7. Chemical safety assessment:
No

15.8. Sources:
OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3:
H225, Highly flammable liquid and vapour.
H319, Causes serious eye irritation.
H332, Harmful if inhaled.
H336, May cause drowsiness or dizziness.
In use may form flammable/explosive vapour-air mixture, In use may form flammable/explosive vapour-air mixture.

The full text of identified uses as mentioned in section 1:
None known.

Abbreviations and acronyms:
ACGIH = American Conference of Governmental Industrial Hygienists
ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CERCLA = Comprehensive Environmental Response Compensation and Liability Act
DOT = Department of Transportation
EINECS = European Inventory of Existing Commercial chemical Substances
EPCRA = Emergency Planning and Community Right-To-Know Act
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HCIS = Hazardous Chemical Information System
HNOC = Hazards Not Otherwise Classified
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
LogKow = logarithm of the n-octanol/water coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
OECD = Organisation for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration
PBT = Persistent, Bioaccumulative and Toxic
RCRA = Resource Conservation and Recovery Act
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information:

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

The safety data sheet is validated by:

TMC Industries - QC Department

Other:

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: US-en