

SAFETY DATA SHEET

TMC-40 Electronic Liquid

SECTION 1: IDENTIFICATION

1.1. Product identifier:

Trade name: TMC-40 Electronic Liquid
Other names / Synonyms: Perfluoro compounds, C5-18
Product no.: 95000, 95000-B, 95000-2.2, 95000-11, 95000-44, 95000-550
Other means of identification: CAS No.: 86508-42-1

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

Relevant identified uses of the substance or mixture: Heat Transfer Fluid
Restricted to professional users.
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: 10/1/2025
SDS Version: 8.0
Date of previous version: 1/28/2025 (7.0)

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

2.1. Classification of the substance or mixture:

Not classified according to HCS (29 CFR 1910.1200)

2.2. Label elements:

Hazard pictogram(s): Not applicable.
Signal word: Not applicable.
Hazard statement(s):
Precautionary statement(s):
 ▼ **General:** Not applicable.
 Prevention: Avoid release to the environment. (P273)
 ▼ **Response:** Not applicable.
 ▼ **Storage:** Not applicable.
 Disposal: Refer to manufacturer or supplier for information on recovery or recycling. (P502)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances:

Product/substance	Identifiers	% w/w	Classification	Note
Perfluoro compounds, C5-18	CAS No.: 86508-42-1	100%		[19]

3.2. Mixtures:

Not applicable. This product is a substance.

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:

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

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 person into fresh air and stay with him/her.

▼ Skin contact:

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

▼ Eye contact:

If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and 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:

None known.

4.3. Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

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

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters:

No specific requirements.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

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:

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: Always store in containers of the same material as the original container.

Storage conditions: Dry, cool and well ventilated
Keep container tightly closed

Incompatible materials: Keep Away from heat, sparks and open flame

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)

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	
When the concentration in the air exceeds the occupational exposure limit or irritation and other symptoms occur	full-face multifunctional gas mask				



Skin protection:

Recommended	Type/Category	Standards	
Wear anti-static protective boots.	Wear anti-static protective boots.		
Wear flame-retardant, anti-static and anti-seeping protective clothing	Wear flame-retardant, anti-static and anti-seeping protective clothing		

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Chemical Resistant gloves				

Eye protection:

Type	Standards	
Safety glasses	EN166	
Face shield	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Physical state:	Liquid
Color:	Transparent, Colourless
Odor:	No data available
Odor threshold (ppm):	No data available
pH:	No data available
Density (g/cm³):	1.855 (20 °C)
Relative density:	No data available
Kinematic viscosity:	2.2 centistokes
Particle characteristics:	Not applicable

Phase changes:

Melting point/freezing point (°F):	-
Melting point/freezing point (°C):	-57
Softening point/range (°F):	Does not apply to liquids.
Boiling point (°F):	-
Boiling point (°C):	158-173
Vapor pressure:	290 Pa
Relative vapor density:	No data available
Decomposition temperature (°F):	No data available

Data on fire and explosion hazards:

Flash point (°F):	No flash point
Flammability (°F):	The material is not combustible.
Auto-ignition temperature (°F):	No data available
Explosion limits (% v/v):	No data available

Solubility:

Solubility in water:	Not easily soluble in water
n-octanol/water coefficient (LogKow):	No data available
Solubility in fat (g/L):	Not applicable

9.2. Other information:

Evaporation rate (n-butylacetate = 100):	No data available
Other physical and chemical parameters:	No data available.
Surface tension (mN/m):	16 mN/m
Molecular Weight (g/mol):	650
Oxidizing properties:	Not applicable

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:

None known.

10.5. Incompatible materials:

Keep Away from heat, sparks and open flame

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	Perfluoro compounds, C5-18
Species:	Rat
Route of exposure:	Dermal
Test:	LD50
Result:	>5000 mg/kg

Product/substance	Perfluoro compounds, C5-18
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50 (4 hours)
Result:	5502 mg/m ³

Product/substance	Perfluoro compounds, C5-18
Species:	Rat
Route of exposure:	Oral
Result:	>5000 mg/kg

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

▼ Skin corrosion/irritation:

Product/substance	Perfluoro compounds, C5-18
Species:	Rabbit
Result:	No adverse effect observed (Not irritating)

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

▼ Serious eye damage/irritation:

Product/substance	Perfluoro compounds, C5-18
Species:	Rabbit
Result:	No adverse effect observed (Not irritating)

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

▼ Respiratory sensitisation:

Product/substance	Perfluoro compounds, C5-18
Result:	For the components(s), either no data are available or the data are not sufficient for the classification.

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

▼ Skin sensitisation:

Product/substance Perfluoro compounds, C5-18
 Result: For the components(s), either no data are available or the data are not sufficient for the classification.

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

▼ Germ cell mutagenicity:

Product/substance Perfluoro compounds, C5-18
 Conclusion: No adverse effect observed

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

▼ Carcinogenicity:

Product/substance Perfluoro compounds, C5-18
 Conclusion: No data available or the data not sufficient for classification.

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

▼ Reproductive toxicity:

Product/substance Perfluoro compounds, C5-18
 Species: Rat
 Duration: per mating into lactation
 Test: NOAEL
 Result: 1000 mg/kg bw/day
 Conclusion: Not Classified

Product/substance Perfluoro compounds, C5-18
 Species: Rat
 Duration: 28 days
 Test: NOAEL
 Result: 1000 mg/kg bw/day
 Conclusion: Not Classified

Product/substance Perfluoro compounds, C5-18
 Species: Rat
 Duration: During gestation
 Test: NOAEL
 Result: 1000 mg/kg bw/day
 Conclusion: Not Classified

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

▼ STOT-single exposure:

Product/substance Perfluoro compounds, C5-18
 Conclusion: No data available or the data not sufficient for classification.

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

▼ STOT-repeated exposure:

Product/substance Perfluoro compounds, C5-18
 Species: Rat
 Route of exposure: Oral
 Target organ: Endocrine system, liver, heart, hematopoietic system, immune system, nervous system, kidney/bladder
 Duration: 13 weeks
 Test: NOAEL
 Result: 1200 mg/kg bw/day
 Conclusion: Not Classified

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

▼ Aspiration hazard:

Product/substance Perfluoro compounds, C5-18
Conclusion: No data available or the data is not sufficient for classification.

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

Long term effects:

None known.

Other information:

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. ▼ Toxicity:

Product/substance Perfluoro compounds, C5-18
Other information: None known.

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

12.2. Persistence and degradability:

Product/substance Perfluoro compounds, C5-18
Conclusion: -
Other information: None known.

12.3. Bioaccumulative potential:

Product/substance Perfluoro compounds, C5-18
Conclusion: No potential for bioaccumulation

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):

None of the components are listed

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): Perfluoro compounds, C5-18 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: None of the components are listed

Hazardous chemical inventory reporting: This product is not subject to Tier II reporting.

State regulations:

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

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

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

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

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

15.4. Restrictions for application:

Restricted to professional users.

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

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
 LogPow = logarithm of the octanol/water partition 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:

Not applicable.

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