

SAFETY DATA SHEET

TMC-7300E

SECTION 1: IDENTIFICATION

1.1. Product identifier:

Trade name:	TMC-7300E
Other names / Synonyms:	Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)-3-Methoxyperfluoro(2-methylpentane) 1,1,1,2,2,3,4,5,5,5-Decafluoro-3-methoxy-4-(trifluoromethyl)pentane 1,1,1,2,3,4,4,5,5,5-Decafluoro-3-methoxy-2-(trifluoromethyl)pentane
Product no.:	7300E, 7300E-12, 7300E-55, 7300E-550
Other means of identification:	CAS No.: 132182-92-4

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

Relevant identified uses of the substance or mixture:	Heat Transfer, Solvent (for cleaning and degreasing), Cooling Agent, Electrical Insulator 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:	5/9/2024
SDS Version:	1.0
Date of previous version:	5/2/2024 (1.0)

1.4. Emergency telephone number:

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (trriage.webpoisoncontrol.org) to get specific guidance for your case
See also section 4 "First aid measures".
Emergency Telephone Number: CHEMTREC 24-HR Emergency USA, Canada, Puerto Rico, US Virgin Islands (800) 424-9300.

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:	-
Prevention:	-
Response:	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. (P301+P312)
Storage:	-
Disposal:	Refer to the manufacturer/supplier for information on disposal/ recovery/ recycling. (P503)
Additional labelling:	Not applicable.

2.3. Other hazards:

Additional warnings: This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances:

Product/substance	Identifiers	% w/w	Classification	Note
1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane	CAS No.: 132182-92-4	99-100%		

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:

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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:	In case of discomfort: bring the person into fresh air.
Skin contact:	Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.
Eye contact:	Rinse gently with lukewarm water. Remove any contact lenses if this is easy to do. Continue rinsing. In case of persistent eye irritation or discomfort: Seek medical help.
Ingestion:	Rinse and flush mouth thoroughly and consume large quantities of water. In case of continued discomfort: seek medical assistance and bring this safety data sheet.
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
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.

Fire fighters should wear appropriate personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation, especially in confined areas.

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:

Recommended storage material:

Keep Away from heat, sparks and open flame
Keep in properly labeled containers

- Storage temperature:** Keep container tightly closed
Store in a cool and dark place
Do not place container horizontally or upside down
Store at normal temperature under normal warehouse conditions and away from heat source
- Incompatible materials:** Strong oxidizing agents

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:
1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Long term exposure limit (OSHA Table Z-1) (ppm): 100


Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

- 8.2. Exposure controls:**
Compliance with the given occupational exposure limits values should be controlled on a regular basis.
- 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:** Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
- Appropriate technical measures:** The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.
Apply standard precautions during use of the product. Avoid inhalation of vapours.
- Hygiene measures:** Wash hands after use.
- 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 product is subjected to extreme heat, HF may be formed.	Positive pressure supplied air respirator.				


Skin protection:

Work situation	Recommended	Type/Category	Standards	
if the situation requires.	Use proper protective clothing	Use proper protective clothing		

Hand protection:

Work situation	Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
if the situation requires.	Neoprene				

Eye protection:

Work situation	Type	Standards	
if the situation requires.	Safety glasses	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Physical state:	Liquid
Colour:	Clear, Colorless - Almost colorless
Odour:	No data available
Odour threshold (ppm):	No data available
pH:	No data available
Density (g/cm³):	No data available
Relative density:	1.67
Kinematic viscosity:	0.71 centistokes (25 °C)
Dynamic viscosity:	No data available
Particle characteristics:	No data available

Phase changes:

Melting point (°F):	No data available
Softening point/range (waxes and pastes) (°F):	Does not apply to liquids.
Boiling point (°F):	212
Boiling point (°C):	100
Vapour pressure:	45 mmHg
Relative vapour density:	No data available
Decomposition temperature (°F):	No data available

Data on fire and explosion hazards:

Flash point (°F):	None
Flammability (°F):	No data available
Auto-ignition temperature (°F):	766.4
Auto-ignition temperature (°C):	408
Explosion limits (% v/v):	No data available

Solubility:

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

9.2. Other information:

Sensitivity to shock:	No
Thermal stability:	Stable under normal conditions

Evaporation rate (n-butylacetate = 100):	No data available
Other physical and chemical parameters:	No data available.
Surface tension (mN/m):	15
Molecular Weight (g/mol):	350
Oxidizing properties:	No data available

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:

None known.

10.4. Conditions to avoid:

None

10.5. Incompatible materials:

Strong oxidizing agents

Bases

Strong acids

10.6. Hazardous decomposition products:

The product is not degraded when used as specified in section 1.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity:

Product/substance	1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species:	Rat
Route of exposure:	Dermal
Test:	LD50
Result:	>2000 mg/kg

Product/substance	1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species:	Rat
Route of exposure:	Inhalation
Test:	LC50
Result:	>430 mg/L

Product/substance	1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	>2000 mg/kg

Skin corrosion/irritation:

Product/substance	1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species:	Rabbit

Result: No adverse effect observed (Not irritating)

Serious eye damage/irritation:

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species: Rabbit
Result: No adverse effect observed (Not irritating)

Respiratory sensitisation:

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Result: For the components(s), either no data are available or the data are not sufficient for the classification.

Skin sensitisation:

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species: Mouse
Result: Adverse effect observed (sensitising)

Germ cell mutagenicity:

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Conclusion: No adverse effect observed

Carcinogenicity:

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

Reproductive toxicity:

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species: Rat
Duration: per mating into lactation
Test: NOAEL
Result: 281 mg/L
Conclusion: Not Classified
Other information: Test Additional Information

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species: Rat
Duration: 28 days
Test: NOAEL
Result: 281 mg/L
Conclusion: Not Classified

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species: Rat
Duration: per mating into lactation
Test: NOAEL
Result: 281 mg/L
Conclusion: Not Classified
Other information: Test Additional Information

STOT-single exposure:

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Conclusion: Not Classified

STOT-repeated exposure:

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
Species: Rat
Route of exposure: Inhalation
Target organ: Endocrine system, liver, heart, hematopoietic system, immune system, nervous system, kidney/bladder
Duration: 28 days
Test: NOAEL
Result: 281 mg/L

Conclusion: Not Classified

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
 Species: Rat
 Route of exposure: Inhalation
 Target organ: Respiratory system
 Duration: 5 days
 Test: NOAEL
 Result: 143 mg/L
 Conclusion: Not Classified

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
 Species: Rat
 Route of exposure: Oral
 Target organ: Kidney
 Duration: 28 days
 Test: NOAEL
 Result: 150 mg/kg bw/day
 Conclusion: Not Classified

Product/substance 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane
 Species: Rat
 Route of exposure: Oral
 Target organ: Endocrine system, bone, teeth, nails/hair, hematopoietic system, heart, immune system, nervous system
 Duration: 28 days
 Test: NOAEL
 Result: 1000 mg/kg bw/day
 Conclusion: Not Classified

Aspiration hazard:

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

Long term effects:

None known.

Other information:

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

No data available.

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 TMC Industries. Contact TMC for more information.

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 Annex II of Marpol and the IBC Code:

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): 1,1,1,2,2,3,4,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)pentane 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

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

NFPA:

Health hazard: 3

Fire hazard: 1

Instability hazard: 0

Specific hazard: None

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

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

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, Inc. - 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