



TMC Reference Oil

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 8/1/2024 Revision date: 12/16/2024 Supersedes: 8/1/2024 Version: 2.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Trade name : TMC Reference Oil

1.2. Other means of identification

No additional information available.

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Oil represents fully-formulated research engine and gear oils that are shipped to calibrate test apparatus in blind format

1.4. Supplier's details

Test Monitoring Center
203 Armstrong Dr.
Freeport, 16229
Pennsylvania
T 412-365-1000
ghs-sds@astmtmc.org

1.5. Emergency phone number

Emergency number : For Hazardous Materials or Dangerous Goods Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night: 1-800-424-9300 (Toll Free, USA) / 703-527-3887 (Virginia, USA)
CCN 1004806

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification
Not classified

2.2. Label elements

GHS US labeling
No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available.

2.4. Hazards not otherwise classified

No additional information available.

2.5. Unknown acute toxicity

No additional information available.

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SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Highly Refined Mineral Oil	CAS-No.: Mixture	90 – 100	Not classified
Additive Components	CAS-No.: Mixture	1 – 10	Not classified

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	: Call a physician immediately. First aider: Pay attention to self-protection. Never give anything by mouth to an unconscious person. Give artificial respiration if necessary. Induce artificial respiration with mask fitted with one-way valve or other suitable device but not mouth-to-mouth.
First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If the victim is unconscious : Lay in a stable manner on victim's side. Induce artificial respiration with mask fitted with one-way valve or other suitable device; not mouth-to-mouth. Call a physician immediately.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact	: Not expected to present a significant skin hazard under anticipated conditions of normal use.
Symptoms/effects after eye contact	: Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
Symptoms/effects after ingestion	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Carbon dioxide (CO2), dry chemical powder, foam.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Reactivity in case of fire	: Do not overheat, especially in the presence of water as hydrogen sulfide may be released.

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Hazardous decomposition products in case of fire : Toxic fumes may be released. Hydrogen sulfide. Carbon dioxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Use water spray or fog for cooling exposed containers. Move containers from fire area if it can be done without personal risk. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid all personal contact including breathing in the mist, spray, vapors. Do not take actions involving personal risks. Absorb spillage to prevent material-damage. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Evacuate the danger area. If outdoors, move to an area upwind of the danger area. If possible without taking personal risks, remove ignition sources, ventilate area. Prevent other non-emergency personnel from entering the danger area.

For emergency responders

Protective equipment : Wear the recommended personal protective equipment. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Do not touch spilled material. Stop leak if safe to do so. Ventilate spillage area.

Environmental precautions : Do not let the product reach soil, drains, sewers, or surface and ground water.

6.2. Methods and materials for containment and cleaning up

For containment : Contain with non-combustible inert absorbent. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.

Methods for cleaning up : Take up in non-combustible inert absorbent and place into container for disposal. Decontaminate surfaces and equipment with water and detergent. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

For further information refer to section 8: "Exposure controls/personal protection", For further information refer to section 13

SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Take precautionary measures against static discharge. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing mist, spray, vapors. Avoid contact with skin, eyes and clothing.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

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7.2. Conditions for safe storage, including incompatibilities

Storage conditions	: Store in a cool, dry and well-ventilated area away from incompatible substances. This product may contain Zinc Dialkyl DithioPhosphate (ZDDP), a thermally sensitive substance. Odorous and toxic fumes may form from decomposition if stored above 113 °F (45 °C) for extended periods of time or if heat sources in excess of 250 °F (121 °C).
Incompatible materials	: Strong oxidizing agents.
Packaging materials	: Store always product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available.

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station. Handle in accordance with good industrial hygiene and safety procedures.
Environmental exposure controls	: Avoid release to the environment. Take measures to reduce or limit air emissions and releases to soil and the aquatic environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Personal protective equipment should be chosen according to national standards and in discussion with the supplier of the protective equipment. Wear recommended personal protective equipment.

Hand protection:
Wear protective gloves
Eye protection:
Wear safety glasses which protect from splashes
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless Dark amber
Odor	: Hydrocarbon
Odor threshold	: No data available
pH	: No data available

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Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: > 300 °C (600 °F)
Flash point	: > 100 °C (212 °F)
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: < 0.1 kPa (20 °C / 68 °F)
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 0.8 – 0.9 g/cm ³ (15 °C / 59 °F)
Solubility	: Negligible in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: > 22 mm ² /s
Explosion limits	: No data available
Particle characteristics	: No data available

TMC | Highly Refined Mineral Oil

Particle characteristics	No data available
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TMC | Additive Components

Particle characteristics	No data available
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9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available.

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates: Hydrogen sulfide. Carbon dioxide. Carbon monoxide.

SECTION 11 Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
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Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

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Viscosity, kinematic	> 22 mm ² /s
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TMC | Highly Refined Mineral Oil

Viscosity, kinematic	No data available
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TMC | Additive Components

Viscosity, kinematic	No data available
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Symptoms/effects after inhalation : Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact : Not expected to present a significant skin hazard under anticipated conditions of normal use.
Symptoms/effects after eye contact : Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
Symptoms/effects after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
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TMC | Highly Refined Mineral Oil

Persistence and degradability	Not rapidly degradable
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TMC | Additive Components

Persistence and degradability	Not rapidly degradable
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12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Ozone : Not classified
Fluorinated greenhouse gases : No

SECTION 13 Disposal considerations

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations. Dispose of this material and its container at hazardous or special waste collection point. Refer to all applicable national, international and local regulations or provisions.
Additional information : Do not re-use empty containers.
Ecological waste information : Avoid release to the environment.

SECTION 14 Transport information

In accordance with DOT / IMDG / IATA

DOT	IMDG	IATA
14.1. UN number		
Not regulated for transport		
14.2. Proper Shipping Name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
	Not regulated	
No supplementary information available		

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT
Not regulated

IMDG
Not regulated

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IATA

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Highly Refined Mineral Oil	CAS-No. Mixture	90 – 100%
Additive Components	CAS-No. Mixture	1 – 10%

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

No additional information available.

EU-Regulations

No additional information available.

National regulations

No additional information available.

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16 Other information

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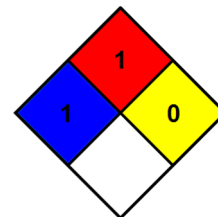
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NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.