

Therminol® XP Heat Transfer Fluid

Version Revision Date: SDS Number: Date of last issue: -
1.1 04/11/2018 150000093461 Date of first issue: 09/18/2013
PRD SDSCA / EN / 0001

SECTION 1. IDENTIFICATION

Product name : Therminol® XP Heat Transfer Fluid
Product code : 34154-00, P3415405, P3415400, P3415404, P3415403,
P3415402, E3415401

Manufacturer or supplier's details

Company name of supplier : Eastman Chemical Company
Address : 200 South Wilcox Drive
Kingsport TN 37660-5280
Telephone : (423) 229-2000
Emergency telephone number : For emergency health, safety and environmental information:
call the United States 1-423-229-4511 or 1-423-229-2000 For
emergency transportation information from Canada: call
CANUTEC at 613-996-6666 or call 800-EASTMAN.

Recommended use of the chemical and restrictions on use

Recommended use : Heat transfer fluids
Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the Hazardous Products Regulations**

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
CAS-No. : Not Assigned

Components

Chemical name	CAS-No.	Concentration (% w/w)
white mineral oil	8042-47-5	100

SECTION 4. FIRST AID MEASURES

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- | | | |
|---|---|---|
| If inhaled | : | Remove person to fresh air and keep comfortable for breathing.
If breathing is difficult, give oxygen.
Get medical attention if symptoms occur. |
| In case of skin contact | : | Wash off with soap and plenty of water.
Get medical attention if symptoms occur.
Wash contaminated clothing before reuse. |
| In case of eye contact | : | In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
Get medical attention if symptoms occur. |
| If swallowed | : | Call a physician or poison control centre immediately.
Do NOT induce vomiting.
Rinse mouth.
Never give anything by mouth to an unconscious person. |
| Most important symptoms and effects, both acute and delayed | : | The molten product can cause serious burns. |
| Notes to physician | : | Treat symptomatically. |

SECTION 5. FIREFIGHTING MEASURES

- | | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray
Carbon dioxide (CO ₂)
Dry chemical
Foam |
| Unsuitable extinguishing media | : | Do not use a solid water stream as it may scatter and spread fire. |
| Hazardous combustion products | : | Hazardous decomposition products due to incomplete combustion
Carbon oxides |
| Further information | : | Use a water spray to cool fully closed containers.
Do not allow run-off from fire fighting to enter drains or water courses. |
| Special protective equipment for firefighters | : | Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Ventilate the area.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Avoid contact with skin and eyes.
Material can create slippery conditions.
Wear appropriate personal protective equipment. |
|---|---|---|

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Local authorities should be advised if significant spillages cannot be contained.

- Environmental precautions : Clear up spills immediately and dispose of waste safely. Avoid release to the environment.
- Methods and materials for containment and cleaning up : Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
-

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours or spray mist.
Handle product only in closed system or provide appropriate exhaust ventilation at machinery.
In case of insufficient ventilation, wear suitable respiratory equipment.
Keep away from flames and sparks.
Wear appropriate personal protective equipment.
Avoid contact with skin, eyes and clothing.
Wash thoroughly after handling.
Wash contaminated clothing before reuse.
Drain or remove substance from equipment prior to break-in or maintenance.
Handle in accordance with good industrial hygiene and safety practice.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Keep in a cool place away from oxidizing agents.
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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

- Engineering measures** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

- Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.
Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.
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If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Hand protection

Remarks : Wear suitable gloves. When handling hot material, use heat resistant gloves.

Eye protection : Wear safety glasses with side shields (or goggles).

Skin and body protection : Wear suitable protective clothing.

Protective measures : Ensure that eye flushing systems and safety showers are located close to the working place.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: oily, liquid
Colour	: colourless
Odour	: odourless
Odour Threshold	: not determined
pH	: not determined
Melting point/range	: -29 °C
Boiling point/boiling range	: 358 °C
Flash point	: 199 °C Method: Cleveland open cup
Evaporation rate	: not determined
Self-ignition	: 346 °C Method: ASTM E659
Upper explosion limit	: not determined
Lower explosion limit	: not determined
Vapour pressure	: < 0.007 hPa (20 °C)
Relative vapour density	: not determined
Relative density	: 0.882 (15 °C)
Density	: 875 kg/m ³ (25 °C)

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Solubility(ies)		
Water solubility	:	negligible
Partition coefficient: n-octanol/water	:	Pow: > 1,000,000 log Pow: > 6
Auto-ignition temperature	:	346 °C Method: ASTM E659
Decomposition temperature	:	not determined
Viscosity		
Viscosity, dynamic	:	27 - 30 mPa.s (38 °C) 24 - 27 mPa.s (40 °C)
Viscosity, kinematic	:	23.7 mm ² /s (40 °C) 4.06 mm ² /s (100 °C)
Explosive properties	:	Not classified
Oxidizing properties	:	Not classified

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	None known.
Conditions to avoid	:	Heating in air. Keep away from flames and sparks.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Emits acrid smoke and fumes when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute oral toxicity	:	Remarks: No data available
Acute inhalation toxicity	:	Remarks: No data available
Acute dermal toxicity	:	Remarks: No data available

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Components:**white mineral oil:**

Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
 Exposure time: 4 h

Acute dermal toxicity : LD50 Dermal (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation**Product:**

Remarks: No data available

Components:**white mineral oil:**

Species: Rabbit
Exposure time: 24 h
Result: none

Serious eye damage/eye irritation**Product:**

Remarks: No data available

Components:**white mineral oil:**

Species: Rabbit
Result: none
Exposure time: 24 h

Respiratory or skin sensitisation**Product:**

Remarks: No data available

Germ cell mutagenicity**Components:****white mineral oil:**

Genotoxicity in vitro : Test Type: Mutagenicity - Bacterial
 Metabolic activation: +/- activation
 Method: Bacterial Reverse Mutation Assay
 Result: negative

Genotoxicity in vivo : Species: Rat
 Method: Mammalian Bone Marrow Chromosome Aberration

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Test
Result: negative

Carcinogenicity**Product:**

Remarks: This information is not available.

Components:**white mineral oil:**

Species: Rat

Application Route: Ingestion

Method: OECD Test No. 453: Combined Chronic Toxicity/Carcinogenicity Studies

Remarks: negative

Reproductive toxicity**Product:**

Effects on fertility : Remarks: No data available

STOT - single exposure**Product:**

Remarks: No data available

Components:**white mineral oil:**

Assessment: Not classified

STOT - repeated exposure**Product:**

Remarks: No data available

Components:**white mineral oil:**

Assessment: Not classified

Repeated dose toxicity**Components:****white mineral oil:**

Species: Rat

NOAEL: \geq 1,200 mg/kg

Application Route: Oral Study

Exposure time: 90 days

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Aspiration toxicity**Product:**

No aspiration toxicity classification

Information on likely routes of exposure**Product:**

Inhalation : Remarks: None known.
Skin contact : Remarks: None known.
Eye contact : Remarks: None known.
Ingestion : Remarks: None known.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****white mineral oil:**

Toxicity to fish : LL50 (Lepomis macrochirus (Bluegill sunfish)): > 100 mg/l
Exposure time: 96 h
Toxicity to daphnia and other : LL50 (Daphnia magna (Water flea)): > 100 mg/l
aquatic invertebrates Exposure time: 48 h
Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (algae)): > 100 mg/l
Exposure time: 72 h

Persistence and degradability**Product:**

Biodegradability : Result: Inherently biodegradable.
Biochemical Oxygen Demand (BOD) : Remarks: No data available
Chemical Oxygen Demand (COD) : Remarks: No data available

Bioaccumulative potential**Product:**

Bioaccumulation : Remarks: Potential bioaccumulation

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Mobility in soil**Product:**

Distribution among environmental compartments : Remarks: No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal. Eastman Chemical Company operates a used fluid return program for certain fluids under these used oil standards. Contact your Sales Representative for details.

SECTION 14. TRANSPORT INFORMATION**International Regulations****IATA-DGR**

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations**TDG**

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION**The components of this product are reported in the following inventories:**

DSL	: On the inventory, or in compliance with the inventory
AICS	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory

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IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On the inventory, or in compliance with the inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Safety Data Sheet : www.therminol.com/products/

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