

Therminol® 59 Heat Transfer Fluid

Version Revision Date: SDS Number: Date of last issue: 29.05.2020
1.2 25.07.2020 150000093435 Date of first issue: 17.06.2015
PRD SDSAU / EN / 0001

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Therminol® 59 Heat Transfer Fluid
Product code : 34128-00, P3412805, P3412807, P3412801, P3412800,
P3412804, P3412806, P3412808, E3412801

Manufacturer or supplier's details

Company : Eastman Chemical Company
Address : 200 South Wilcox Drive
Kingsport TN 37660-5280
Telephone : (423) 229-2000
Emergency telephone : +(61)-290372994 CHEMTREC: +1-703-527-3887 CCN7321


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**

Skin corrosion/irritation : Category 2
Skin sensitization : Category 1
Aspiration hazard : Category 1

GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of
the workplace.
P280 Wear protective gloves.

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
 P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
 P331 Do NOT induce vomiting.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Benzene, ethylenated, by-products from	68608-82-2	100

SECTION 4. FIRST AID MEASURES

If inhaled	:	Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms occur. If breathing is difficult, give oxygen.
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	:	Immediately call a POISON CENTER/ doctor. Do NOT induce vomiting.
Most important symptoms and effects, both acute and delayed	:	Aspiration hazard May cause an allergic skin reaction. Causes skin irritation. The molten product can cause serious burns.
Notes to physician	:	Do NOT induce vomiting. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Carbon dioxide (CO ₂) Dry chemical
------------------------------	---	--

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

Unsuitable extinguishing media	:	Foam Do not use a solid water stream as it may scatter and spread fire.
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	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 fire-fighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
Hazchem Code	:	•3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Remove all sources of ignition. Ventilate the area. Do not breathe vapors or spray mist. Avoid contact with skin and eyes. Material can create slippery conditions. Wear appropriate personal protective equipment. 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. Collect spillage.
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 vapors 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.

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

Pour point	:	-68 °C (1,013 hPa)
Boiling point/boiling range	:	289 °C (1,013 hPa)
Flash point	:	132 °C Method: Pensky-Martens closed cup 138 °C Method: Cleveland open cup
Evaporation rate	:	not determined
Flammability (solid, gas)	:	Not applicable
Self-ignition	:	404 °C Method: ASTM E659
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Vapor pressure	:	0.15 Pa (25 °C)
Relative vapor density	:	not determined
Relative density	:	0.979 (25 °C)
Density	:	971 kg/m ³ (25 °C)
Solubility(ies)		
Water solubility	:	0.55 mg/l (25 °C)
Autoignition temperature	:	not determined
Decomposition temperature	:	not determined
Viscosity		
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	4.0 mm ² /s (40 °C)
Explosive properties	:	Not classified
Oxidizing properties	:	Not classified

SECTION 10. STABILITY AND REACTIVITY

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

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**

Not classified based on available information.

Components:**Benzene, ethylenated, by-products from:**

Acute oral toxicity	:	LD50 Oral (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 1.6 mg/l Exposure time: 1 h Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Components:**Benzene, ethylenated, by-products from:**

Species	:	Rabbit
Exposure time	:	24 h
Assessment	:	Moderate
Result	:	Irritating to skin.

Serious eye damage/eye irritation

Not classified based on available information.

Components:**Benzene, ethylenated, by-products from:**

Species	:	Rabbit
Result	:	No eye irritation
Assessment	:	Not classified

Respiratory or skin sensitization**Skin sensitisation**

May cause an allergic skin reaction.

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

STOT - repeated exposure

Not classified based on available information.

Components:**Benzene, ethylenated, by-products from:**

Assessment : Not classified

Repeated dose toxicity**Components:****Benzene, ethylenated, by-products from:**

Species : Rat
NOAEL : 20 mg/kg
Application Route : by gavage
Exposure time : 14 d

Species : Rat
: 20 mg/m³
Application Route : Inhalation
Exposure time : 28 d

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:**Benzene, ethylenated, by-products from:**

May be fatal if swallowed and enters airways.

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

Inhalation : Remarks: None known.
Skin contact : Remarks: Causes skin irritation.
May cause an allergic skin reaction.
Eye contact : Remarks: None known.
Ingestion : Remarks: May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Benzene, ethylenated, by-products from:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.97 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : LC50 (Ceriodaphnia dubia (water flea)): 0.029 mg/l

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (algae)): 0.485 mg/l
Exposure time: 72 h

NOEC (Pseudokirchneriella subcapitata (algae)): 0.0959 mg/l
Exposure time: 72 h

Persistence and degradability**Components:****Benzene, ethylenated, by-products from:**

Biodegradability : Result: Inherently biodegradable.

Bioaccumulative potential**Components:****Benzene, ethylenated, by-products from:**

Bioaccumulation : Bioconcentration factor (BCF): 250 - 1,090

Partition coefficient: n-octanol/water : Pow: 12,000 - 1,020,000
log Pow: 4.08 - 6.01

Mobility in soil**Components:****Benzene, ethylenated, by-products from:**

Distribution among environmental compartments : log Koc: 3.7

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.

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

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(Benzene, ethylenated, by-products from)

Class : 9

Packing group : III

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

Labels : Miscellaneous
 Packing instruction (cargo aircraft) : 964
 Packing instruction (passenger aircraft) : 964

IMDG-Code

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (Benzene, ethylenated, by-products from)
 Class : 9
 Packing group : III
 Labels : 9
 EmS Code : F-A, S-F
 Marine pollutant : yes

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

Not applicable for product as supplied.

Domestic regulation**ADG**

UN number : UN 3082
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
 (Benzene, ethylenated, by-products from)
 Class : 9
 Packing group : III
 Labels : 9
 Hazchem Code : •3Z
 Remarks : Shipping in package sizes of less than 5 L (liquids) or 5 KG (solids) may lead to a non-regulated classification.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Standard for the Uniform Scheduling of Medicines and Poisons : No poison schedule number allocated

Prohibition/Licensing Requirements : There is no applicable prohibition or notification/licensing requirements, including for carcinogens under Commonwealth, State or Territory legislation.

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

The ingredients of this product are reported in the following inventories:

DSL : All components of this product are on the Canadian DSL

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

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

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

TSCA : All substances listed as active on the TSCA inventory

SECTION 16. OTHER INFORMATION**Further information**

Revision Date : 25.07.2020

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

Date format : dd.mm.yyyy

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; 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

Therminol® 59 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 29.05.2020
1.2	25.07.2020	150000093435	Date of first issue: 17.06.2015
PRD		SDSAU / EN / 0001	

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AU / EN