

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

**EASTMAN**

## Therminol® D-12 Heat Transfer Fluid

Version	Revision Date:	SDS Number:	Date of last issue: 02.09.2021
2.5	22.09.2021	150000093448	Date of first issue: 18.09.2013
PRD		SDSEU / EN / 0001	

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : Therminol® D-12 Heat Transfer Fluid

Product code : 34141-00, P3414102, E3414101

REACH Registration Number : 01-2119472146-39-xxxx

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

Use of the Sub-  
stance/Mixture : Heat transfer fluids

Recommended restrictions  
on use : None known.

#### 1.3 Details of the supplier of the safety data sheet

Company : Eastman Chemical Company  
200 South Wilcox Drive  
37660-5147 Kingsport

Telephone : +14232292000

E-mail address of person  
responsible for the SDS : Visit our website at [www.EASTMAN.com](http://www.EASTMAN.com) or email  
[emnmsds@eastman.com](mailto:emnmsds@eastman.com)

#### 1.4 Emergency telephone

NCEC +44 (0)1235 239 670

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Aspiration hazard, Category 1

H304: May be fatal if swallowed and enters air-ways.

#### 2.2 Label elements

##### Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Danger

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If swallowed : Immediately call a POISON CENTER/ doctor.  
Do NOT induce vomiting.  
Rinse mouth with water.  
Never give anything by mouth to an unconscious person.

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Aspiration hazard  
Causes mild skin irritation.  
Prolonged skin contact may defat the skin and produce dermatitis.  
Contact with hot product will cause thermal burns.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Do NOT induce vomiting.  
Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Foam

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

### 5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : Hazardous decomposition products due to incomplete combustion  
Carbon oxides

### 5.3 Advice for firefighters

Special protective equipment for fire-fighters : Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

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.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.  
Ventilate the area.  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Avoid contact with skin and eyes.  
Material can create slippery conditions.

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Wear appropriate personal protective equipment.  
Local authorities should be advised if significant spillages cannot be contained.

### 6.2 Environmental precautions

Environmental precautions : Clear up spills immediately and dispose of waste safely.  
Avoid release to the environment.

### 6.3 Methods and material for containment and cleaning up

Methods for 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).

### 6.4 Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Keep away from flames and sparks.  
Take precautionary measures against static discharges.  
Do not taste or swallow.  
Avoid contact with skin, eyes and clothing.  
Wear appropriate personal protective equipment.  
Handle product only in closed system or provide appropriate exhaust ventilation at machinery.  
Drain or remove substance from equipment prior to break-in or maintenance.  
Handle in accordance with good industrial hygiene and safety practice.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a well-ventilated place. Store in cool place.

### 7.3 Specific end use(s)

Specific use(s) : [www.therminol.com/products/](http://www.therminol.com/products/)

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### 8.2 Exposure controls

##### 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

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Wear safety glasses with side shields (or goggles).

Hand protection

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

Skin and body protection : Wear suitable protective clothing.

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. 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.

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

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Physical state : oily

Color : colourless

Odor : mild

Odor Threshold : not determined

Melting point/freezing point : < -100 °C

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Boiling point/boiling range	:	192 °C (1.013 hPa)
Upper explosion limit / Upper flammability limit	:	6,5 %(V) Medium: air
Lower explosion limit / Lower flammability limit	:	0,6 %(V) Medium: air
Flash point	:	62 °C Method: Pensky-Martens closed cup
Autoignition temperature	:	not determined
Decomposition temperature	:	not determined
pH	:	not determined
Viscosity		
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	14,8 mm <sup>2</sup> /s (-50 °C) 1,23 mm <sup>2</sup> /s (40 °C) 0,65 mm <sup>2</sup> /s (100 °C)
Solubility(ies)		
Water solubility	:	< 1 mg/l (25 °C)
Partition coefficient: n-octanol/water	:	No data available
Vapor pressure	:	< 1 hPa (20 °C)
Relative density	:	0,763
Density	:	0,756 g/cm <sup>3</sup> (25 °C)
Relative vapor density	:	not determined

### 9.2 Other information

Explosives	:	Not classified
Oxidizing properties	:	Not classified
Self-ignition	:	247 °C Method: ASTM E659
Evaporation rate	:	not determined

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

None reasonably foreseeable.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : Stable

#### 10.4 Conditions to avoid

Conditions to avoid : Heating in air.

Keep away from flames and sparks.

#### 10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

#### 10.6 Hazardous decomposition products

Emits acrid smoke and fumes when heated to decomposition.

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### SECTION 11: Toxicological information

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### Acute toxicity

###### Product:

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : LC50 (Rat): > 4.951 mg/m<sup>3</sup>  
Exposure time: 4 h  
Assessment: Not classified

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5.000 mg/kg  
Assessment: Not classified

##### Skin corrosion/irritation

###### Product:

Species : Rabbit  
Exposure time : 4 h  
Result : slight

##### Serious eye damage/eye irritation

###### Product:

Species : Rabbit

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Exposure time : 24 h  
Assessment : Not classified

### Respiratory or skin sensitization

#### Product:

Test Type : Skin Sensitization  
Species : Guinea pig  
Assessment : Does not cause skin sensitisation.

### Carcinogenicity

#### Product:

Remarks : This information is not available.

### Reproductive toxicity

#### Product:

Effects on fertility : Remarks: No data available

### STOT-single exposure

#### Product:

Remarks : No data available

### STOT-repeated exposure

#### Product:

Remarks : No data available

### Aspiration toxicity

#### Product:

May be fatal if swallowed and enters airways.

## 11.2 Information on other hazards

### Routes of exposure

#### Product:

Inhalation : Remarks: None known.  
Skin contact : Remarks: None known.  
Eye contact : Remarks: None known.  
Ingestion : Remarks: May be fatal if swallowed and enters airways.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

**Product:**

- Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l  
Exposure time: 96 h  
Test Type: Fish, Acute Toxicity Test  
Method: OECD Test Guideline 203  
Remarks: Read-across from a similar material
- Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1.000 mg/l  
Exposure time: 48 h  
Test Type: Daphnia sp. Acute Immobilisation Test  
Method: OECD Test Guideline 202  
Remarks: Read-across from a similar material
- Toxicity to algae/aquatic plants : NOELR (Pseudokirchneriella subcapitata (algae)): 1.000 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Read-across from a similar material
- EL50 (Pseudokirchneriella subcapitata (algae)): > 1.000 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Read-across from a similar material
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: > 1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: Daphnia magna Reproduction Test  
Method: OECD Test Guideline 211

#### 12.2 Persistence and degradability

**Product:**

- Biodegradability : Biodegradation: 41 %  
Exposure time: 41 d  
Method: OECD Test Guideline 301F  
Remarks: Read-across from a similar material

#### 12.3 Bioaccumulative potential

No data available

#### 12.4 Mobility in soil

**Product:**

- Stability in soil : Remarks: Given its physical and chemical characteristics, the product generally shows low soil mobility. The product is insoluble and floats on water.

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### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.

## SECTION 14: Transport information

### 14.1 UN number or ID number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High : Not applicable

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Concern for Authorization (Article 59).

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : Not applicable

### 15.2 Chemical Safety Assessment

None.

## SECTION 16: Other information

### Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA

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- Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Sources of key data used to : [www.therminol.com/products/](http://www.therminol.com/products/)  
compile the Material Safety  
Data Sheet

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.

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