

Trade name: Therminol 75**Product no.:** 5008790**Current version :** 3.0.0, issued: 21.10.2021**Replaced version:** 2.0.1, issued: 24.08.2021**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****Therminol 75****1.2 Relevant identified uses of the substance or mixture and uses advised against****Relevant identified uses of the substance or mixture**

heat transfer fluids

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet**Address**

Krahn Chemie Deutschland GmbH

Grimm 10

20457 Hamburg

Deutschland

Telephone no. +49 40 320 92-0

Fax no. +49 40 320 92-322

Information provided by / telephone

+49 40 320 92-0

Advice on Safety Data Sheet

msds@krahn.eu

1.4 Emergency telephone number

For medical advice (in German and English):

+49 551 192 40 (Giftinformationszentrum Nord)

In case of transport incidents and other emergencies:

+44 (0)1235 239 670 (NCEC, National Chemical Emergency Centre)

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification in accordance with Regulation (EC) No 1272/2008 (CLP)**

Skin Sens. 1; H317

Aquatic Acute 1; H400

Aquatic Chronic 1; H410

Classification information

Classification and labelling with respect to water pollution risks are based on ecotoxicological studies performed on the product (mixture).

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008 (CLP Regulation)****Hazard pictograms**

GHS07



GHS09

Signal word

Warning

Hazardous component(s) to be indicated on label:

Reaction mass of m-terphenyl and o-terphenyl

Hazard statement(s)

H317

May cause an allergic skin reaction.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261

Avoid breathing dust/fume/gas/mist/vapours/spray.

P273

Avoid release to the environment.

P280

Wear protective gloves.

P333+P313

If skin irritation or rash occurs: Get medical advice/attention.

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P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

2.3 Other hazards

PBT assessment
The components of this product are not considered to be a PBT.
vPvB assessment
The components of this product are not considered to be a vPvB.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Not applicable. The product is not a substance.

3.2 Mixtures**Hazardous ingredients**

No	Substance name	Classification (EC) 1272/2008 (CLP)	Additional information	
	CAS / EC / Index / REACH no		Concentration	%
1	Reaction mass of m-terphenyl and o-terphenyl			
	-	Aquatic Acute 1; H400	95.00 - < 100.00	wt%
	904-797-4	Aquatic Chronic 1; H410		
	-	Skin Sens. 1B; H317		
	01-2120770947-37			
2	phenanthrene			
	85-01-8	Acute Tox. 4; H302	1.00 - < 5.00	wt%
	201-581-5			
	-			

Full Text for all H-phrases and EUH-phrases: pls. see section 16

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
1	-	-	M = 100	M = 100

SECTION 4: First aid measures**4.1 Description of first aid measures****General information**

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing. If the patient is likely to become unconscious, place and transport in stable sideways position.

After inhalation

Ensure supply of fresh air. Remove affected person from the immediate area. Irregular breathing/no breathing: artificial respiration.

After skin contact

When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.

After eye contact

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes).

After ingestion

Rinse the mouth thoroughly with water. Do not induce vomiting. Call a doctor immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

Poisonous symptoms can first be observed after several hours, therefore medical observation for at least 48 hours is necessary.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Water spray jet; Carbon dioxide; Extinguishing powder; Foam

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon monoxide (CO); Carbon dioxide (CO₂)

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Use self-contained breathing apparatus. Wear protective clothing. Cool endangered containers with water spray jet. Run-off water from fire fighting must not be discharged into drains or enter surface water. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. High risk of slipping due to leakage/spillage of product.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Collect mechanically. Send in suitable containers for recovery or disposal.

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

Provide good ventilation at the work area (local exhaust ventilation, if necessary). If workplace exposure limits are exceeded, respiratory protection approved for this particular job must be worn.

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and after work. Avoid contact with eyes and skin. Provide eye wash fountain in work area. Remove soiled or soaked clothing immediately.

Advice on protection against fire and explosion

Keep away from sources of heat and ignition.

7.2 Conditions for safe storage, including any incompatibilities**Technical measures and storage conditions**

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

Requirements for storage rooms and vessels

Containers which are opened must be carefully closed and kept upright to prevent leakage. Keep only in the original container.

Incompatible products

Do not store together with: oxidizing agents

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****DNEL, DMEL and PNEC values****DNEL values (worker)**

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	Reaction mass of m-terphenyl and o-terphenyl			-	
				904-797-4	
	dermal	Long term (chronic)	systemic	0.467	mg/kg/day
	inhalative	Long term (chronic)	systemic	1645.00	mg/m ³

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	Reaction mass of m-terphenyl and o-terphenyl		-	
			904-797-4	
	water	fresh water	0.007	µg/L
	water	marine water	0.001	µg/L
	water	fresh water sediment	0.012	µg/kg
	with reference to: dry weight			

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	water	marine water sediment	0.012	µg/kg
	with reference to: dry weight			
	soil	-	0.024	mg/kg
	with reference to: dry weight			
	sewage treatment plant	-	8.025	mg/L
	secondary poisoning	-	6.67	mg/kg
	with reference to: food			

8.2 Exposure controls**Appropriate engineering controls**

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**

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of dust, vapour and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection

Safety glasses (EN 166)

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves. Heat-resistant gloves when using hot material (EN 407).

Other

Chemical-resistant work clothes. Make sure when selecting personal protective equipment (PPE), that it is suitable for the activity, workplace conditions in which it will be used according to the applying European CEN standards and upon consultation with the PPE supplier.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

State of aggregation			
solid			
Form/Colour			
solid			
yellow			
Odour			
mild; pleasant			
pH value			
no data available			
Boiling point / boiling range			
Value	343	°C	
Reference pressure	1013	hPa	
Melting point/freezing point			
Value	75	- 80	°C
Decomposition temperature			
No data available			
Flash point			
Value	185	°C	
Method	Cleveland open cup		
Ignition temperature			
No data available			
Auto-ignition temperature			
Value	538	°C	
Method	ASTM D 2155		
Flammability			
Not relevant			

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Lower explosion limit			
No data available			
Upper explosion limit			
No data available			
Vapour pressure			
Value	<	0.0001	hPa
Reference temperature		25	°C
Relative vapour density			
No data available			
Relative density			
Value		1.09	
Reference temperature		50	°C
Density			
Value		1.041	g/cm ³
Reference temperature		80	°C
Solubility in water			
Value		0.15	mg/l
Solubility			
No data available			
Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
log Pow		5.84	
Reference temperature		30	°C
Method	OECD 117		
Source	ECHA		
Viscosity			
Value		25.1	mm ² /s
Reference temperature		80	°C
Type	kinematic		
Value		3.75	mm ² /s
Reference temperature		100	°C
Type	kinematic		
Particle characteristics			
No data available			

9.2 Other information

Other information	
No data available.	

SECTION 10: Stability and reactivity**10.1 Reactivity**

Dangerous reactions are not expected if the product is handled according to its intended use.

10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions

Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 Conditions to avoid

Heat, naked flames and other ignition sources.

10.5 Incompatible materials

Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

Acute oral toxicity (result of the ATE calculation for the mixture)	
No	Product Name

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1	Therminol 75		
Comments		The result of the applied calculation method according to the European Regulation (EC) 1272/2008 (CLP), Paragraph 3.1.3.6, Part 3 of Annex I is outside the values that imply a classification / labelling of this mixture according to table 3.1.1 defining the respective categories (ATE oral > 2000 mg/kg).	
Acute oral toxicity			
No	Product Name		
1	Therminol 75		
LD50		>	2000 mg/kg
Species		rat	
Source		supplier	
Acute dermal toxicity			
No	Product Name		
1	Therminol 75		
LD50		>	5000 mg/kg
Species		rabbit	
Source		supplier	
Acute inhalational toxicity			
No	Product Name		
1	Therminol 75		
LC50		>	3.8 mg/l
State of aggregation		Vapour	
Species		rat	
Source		supplier	
No	Substance name	CAS no.	EC no.
2	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
LC50		>	3.8 mg/l
Duration of exposure		4	h
State of aggregation		Dust/mist	
Species		rat	
Method		OECD 403	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Skin corrosion/irritation			
No	Substance name	CAS no.	EC no.
1	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
Species		rabbit	
Method		OECD 404	
Source		ECHA	
Evaluation		non-irritant	
Serious eye damage/irritation			
No	Substance name	CAS no.	EC no.
1	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
Species		rabbit	
Method		OECD 405	
Source		ECHA	
Evaluation		non-irritant	
Respiratory or skin sensitisation			
No	Substance name	CAS no.	EC no.
1	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
Route of exposure		Skin	
Species		guinea pig	
Method		OECD 429	
Evaluation		sensitizing	
Germ cell mutagenicity			
No	Substance name	CAS no.	EC no.
1	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Reproduction toxicity			
No data available			
Carcinogenicity			
No data available			
STOT - single exposure			

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No data available

STOT - repeated exposure

No data available

Aspiration hazard

No data available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Contact with hot material may cause thermal burns.

11.2 Information on other hazards**Endocrine disrupting properties**

No data available.

Other information

No data available.

SECTION 12: Ecological information**12.1 Toxicity****Toxicity to fish (acute)****No Product Name****1 Therminol 75**

LC50	27	mg/l
Duration of exposure	96	h
Species	Oncorhynchus mykiss	

Toxicity to fish (chronic)**No Product Name****1 Therminol 75**

NOEC	0.037	mg/l
Duration of exposure	30	day(s)
Species	Pimephales promelas	

Toxicity to Daphnia (acute)**No Product Name****1 Therminol 75**

EC50	0.022	mg/l
Duration of exposure	48	h
Species	Daphnia magna	

Toxicity to Daphnia (chronic)**No Product Name****1 Therminol 75**

NOEC	0.0048	mg/l
Duration of exposure	21	day(s)

Toxicity to algae (acute)**No Product Name****1 Therminol 75**

EC50	>	0.0248	mg/l
Duration of exposure		72	h
Species	Scenedesmus capricornutum		

Toxicity to algae (chronic)

No data available

Bacteria toxicity

No data available

12.2 Persistence and degradability**Biodegradability**

No	Substance name	CAS no.	EC no.
1	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
Type	aerobic biodegradation		
Value		11	%
Duration		28	day(s)
Method	OECD 301 B		
Source	ECHA		
Evaluation	not readily biodegradable		

12.3 Bioaccumulative potential**Bioconcentration factor (BCF)**

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No	Substance name	CAS no.	EC no.
1	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
BCF		600	
Species		Carassius auratus	
Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	Reaction mass of m-terphenyl and o-terphenyl	-	904-797-4
log Pow		5.84	
Reference temperature		30	°C
Method		OECD 117	
Source		ECHA	

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	The components of this product are not considered to be a PBT.
vPvB assessment	The components of this product are not considered to be a vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

12.8 Other information

Other information
Do not discharge product unmonitored into the environment.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Disposal of the product should be carried out in accordance with all applicable regulations following consultation with the responsible local authority and the disposal company in an authorised and suitable disposal facility.
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging

Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

SECTION 14: Transport information**14.1 Transport ADR/RID/ADN**

Class	9
Classification code	M7
Packing group	III
Hazard identification no.	90
UN number	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Technical name	Reaction mass of m-terphenyl and o-terphenyl
Tunnel restriction code	-
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.2 Transport IMDG

Class	9
Packing group	III
UN number	UN3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Technical name	Reaction mass of m-terphenyl and o-terphenyl
EmS	F-A, S-F
Label	9
Marine pollutant mark	Symbol "fish and tree"

14.3 Transport ICAO-TI / IATA

Class	9
Packing group	III
UN number	UN3077

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Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Technical name	Reaction mass of m-terphenyl and o-terphenyl
Label	9
Environmentally hazardous substance mark	Symbol "fish and tree"

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulations****Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

The product contains following substance(s) meeting the criteria in Article 57 in association with Article 59 of the REACH regulation ((EC) 1907/2006) that are placed on the list of candidates considered for inclusion in annex XIV (substances subject to Authorisation).

No	Substance name	CAS no.	EC no.
1	phenanthrene	85-01-8	201-581-5

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances subject to restriction as listed in Annex XVII of the REACH regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

This product is subject to Part I of Annex I, risk category:

E1

Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)

Comments not applicable

National regulations**National chemical inventories**

USA (TSCA)	listed
DSL/NDL (Canada)	DSL listed
ECL (Korea)	listed
IECSC / NEPA (China)	listed
CSNN (Taiwan)	TCSI listed

15.2 Chemical safety assessment

A chemical safety assessment has been carried out for this substance.

SECTION 16: Other information**Sources of key data used to compile the data sheet:**

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP) as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

H302	Harmful if swallowed.
H400	Very toxic to aquatic life.

Creation of the safety data sheet

UMCO GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 187, Tel.: +49(40)555 546 300, Fax: +49(40)555 546 357, e-mail: umco@umco.de

This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

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It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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