

Trade name: Therminol 54**Product no.:** 5008358**Current version :** 1.1.0, issued: 19.10.2021**Replaced version:** 1.0.1, issued: 01.12.2020**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****Therminol 54****Substance name**

Benzene, mono-C10-13-alkyl derivs., distn. residues

REACH registration no.

01-2119485843-26

Identification numbers**CAS no.**

84961-70-6

EC no.

284-660-7

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

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Information provided by / telephone

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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)**

Asp. Tox. 1; H304

Classification information

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 and 4 of Annex I to CLP.

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

84961-70-6 (Benzene, mono-C10-13-alkyl derivs., distn. residues)

Hazard pictograms

GHS08

Signal word

Danger

Hazard statement(s)

H304

May be fatal if swallowed and enters airways.

Precautionary statement(s)

P301+P310

IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P331

Do NOT induce vomiting.

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P405 Store locked up.
P501 Dispose of contents/container to an approved waste facility.

2.3 Other hazards

PBT assessment
The product is not considered to be a PBT.
vPvB assessment
The product is not considered to be a vPvB.

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

Substance name Benzene, mono-C10-13-alkyl derivs., distn. residues

Identification numbers

CAS no. 84961-70-6
EC no. 284-660-7

3.2 Mixtures

Not applicable. The product is not a mixture.

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. In case of breathing difficulties give oxygen.

After skin contact

When in contact with the skin, clean with soap and water.

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 - aspiration hazard. Call a doctor immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed**Symptoms**

Contact with molten material may cause thermal burns.

Effects

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

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)

5.3 Advice for firefighters

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**

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Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation. Do not inhale vapours. 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. Do not discharge into the subsoil/soil.

6.3 Methods and material for containment and cleaning up

Prevent spread over a wide area. Take up with absorbent material (e.g., sand, kieselguhr, universal binder). 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. Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances.

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 product contact with skin, eyes and clothing; Provide eye wash fountain in work area. Do not inhale vapours. 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. Always keep in containers of same material as the original.

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	Benzene, mono-C10-13-alkyl derivs., distn. residues			84961-70-6 284-660-7
	dermal	Long term (chronic)	systemic	96 mg/kg/day

PNEC values

No	Substance name		CAS / EC no
	ecological compartment	Type	Value
1	Benzene, mono-C10-13-alkyl derivs., distn. residues		84961-70-6 284-660-7
	water	fresh water	0.000075 mg/L
	water	marine water	0.0000075 mg/L
	water	Aqua intermittent	0.001 mg/L
	water	fresh water sediment	1761 mg/kg dry weight
	water	marine water sediment	1761 mg/kg dry weight
	sewage treatment plant	-	2 mg/L

8.2 Exposure controls

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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 aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Eye / face protection

Safety glasses with side protection shield (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. Check in any case suitability of protective glove for the specific workplace conditions (e.g. mechanical resistance, product compatibility, antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement 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		
liquid		
Form/Colour		
liquid, clear		
yellow		
Odour		
characteristic		
pH value		
No data available		
Boiling point / boiling range		
Value	351	°C
Melting point/freezing point		
No data available		
Decomposition temperature		
No data available		
Pour point		
Value	-45	°C
Flash point		
Value	> 160	°C
Method	Pensky-Martens closed cup	
Value	> 170	°C
Method	Cleveland open cup	
Ignition temperature		
No data available		
Auto-ignition temperature		
Value	> 330	°C
Method	ASTM E 659	
Flammability		
Not applicable		
Lower explosion limit		
No data available		
Upper explosion limit		
No data available		
Vapour pressure		
Value	< 0.05	hPa

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Reference temperature	20	°C
Value	< 0.05	hPa
Reference temperature	50	°C

Relative vapour density
No data available

Relative density
Value 0.8626 - 0.8970

Density
No data available

Solubility in water
Value 0.0001 g/l
Comments essentially insoluble

Solubility
No data available

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	Benzene, mono-C10-13-alkyl derivs., distn. residues	84961-70-6	284-660-7
log Pow		6.6 - 9.9	

Viscosity
Value 19 mm²/s
Reference temperature 40 °C
Type kinematic
Value 3.52 mm²/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			
No	Substance name	CAS no.	EC no.
1	Benzene, mono-C10-13-alkyl derivs., distn. residues	84961-70-6	284-660-7
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		

Acute dermal toxicity			
No	Substance name	CAS no.	EC no.
1	Benzene, mono-C10-13-alkyl derivs., distn. residues	84961-70-6	284-660-7
LD50	>	4300	mg/kg bodyweight

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Species	rat
Source	ECHA
Acute inhalational toxicity	
No data available	
Skin corrosion/irritation	
No	Substance name
1	Benzene, mono-C10-13-alkyl derivs., distn. residues
	CAS no. 84961-70-6
	EC no. 284-660-7
Species	rabbit
Method	OECD 404
Source	ECHA
Evaluation	non-irritant
Serious eye damage/irritation	
No	Substance name
1	Benzene, mono-C10-13-alkyl derivs., distn. residues
	CAS no. 84961-70-6
	EC no. 284-660-7
Species	rabbit
Method	OECD 405
Source	ECHA
Evaluation	non-irritant
Respiratory or skin sensitisation	
No	Substance name
1	Benzene, mono-C10-13-alkyl derivs., distn. residues
	CAS no. 84961-70-6
	EC no. 284-660-7
Route of exposure	Skin
Species	guinea pig
Method	OECD 406
Source	ECHA
Evaluation	non-sensitizing
Germ cell mutagenicity	
No	Substance name
1	Benzene, mono-C10-13-alkyl derivs., distn. residues
	CAS no. 84961-70-6
	EC no. 284-660-7
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Reproduction toxicity	
No	Substance name
1	Benzene, mono-C10-13-alkyl derivs., distn. residues
	CAS no. 84961-70-6
	EC no. 284-660-7
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Carcinogenicity	
No data available	
STOT - single exposure	
No data available	
STOT - repeated exposure	
No	Substance name
1	Benzene, mono-C10-13-alkyl derivs., distn. residues
	CAS no. 84961-70-6
	EC no. 284-660-7
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Aspiration hazard	
In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.	
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	Substance name	CAS no.	EC no.
1	Benzene, mono-C10-13-alkyl derivs., distn. residues	84961-70-6	284-660-7

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LC50	>	100	mg/l
Duration of exposure		96	h
Species	Pimephales promelas		
Method	ASTM E729-96		
Source	ECHA		

Toxicity to fish (chronic)

No data available

Toxicity to Daphnia (acute)

No data available

Toxicity to Daphnia (chronic)

No data available

Toxicity to algae (acute)

No data available

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	Benzene, mono-C10-13-alkyl derivs., distn. residues	84961-70-6	284-660-7
Type	aerobic biodegradation		
Value		28	%
Duration		28	day(s)
Source	ECHA		
Evaluation	not readily biodegradable		

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

No	Substance name	CAS no.	EC no.
1	Benzene, mono-C10-13-alkyl derivs., distn. residues	84961-70-6	284-660-7
BCF		3.12	

Partition coefficient n-octanol/water (log value)

No	Substance name	CAS no.	EC no.
1	Benzene, mono-C10-13-alkyl derivs., distn. residues	84961-70-6	284-660-7
log Pow	6.6	-	9.9

12.4 Mobility in soil**Mobility in soil**

No	Substance name	CAS no.	EC no.
1	Benzene, mono-C10-13-alkyl derivs., distn. residues	84961-70-6	284-660-7
log Koc	6.3	-	8.4

12.5 Results of PBT and vPvB assessment**Results of PBT and vPvB assessment**

PBT assessment	The product is not considered to be a PBT.
vPvB assessment	The product is 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.

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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**

The product is not subject to ADR/RID/ADN regulations.

14.2 Transport IMDG

The product is not subject to IMDG regulations.

14.3 Transport ICAO-TI / IATA

The product is not subject to ICAO-TI / IATA regulations.

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)**

In accordance with the REACH regulation (EC) 1907/2006, the product does not contain any substances that are considered as subject to listing in annex XIV, inventory of substances requiring authorisation.

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

In accordance with article 57 and article 59 of the Reach regulation (EC) 1907/2006, this substance is not considered as subject to listing in annex XIV, inventory of substances requiring authorisation ("Authorization list").

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

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No 3

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

This substance is not subject to Part 1 or 2 of Annex I

National regulations**National chemical inventories**

EINECS/ELINCS (European Community)	components listed (DSL)
USA (TSCA)	components listed
DSL/NDL (Canada)	components listed (DSL)
ENCS (Japan)	components listed
ECL (Korea)	components listed
AICS (Australia)	components listed
IECSC / NEPA (China)	components listed
PICCS (Philippines)	components listed
CSNN (Taiwan)	components listed

15.2 Chemical safety assessment

A chemical safety assessment has not 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.

Creation of the safety data sheet

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Replaced version: 1.0.1, issued: 01.12.2020

Region: GB

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This information is based on our present knowledge and experience.

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

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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Prod-ID 734727