

Trade name: Therminol 62**Product no.:** 5008640**Current version :** 2.1.0, issued: 21.10.2021**Replaced version:** 2.0.0, issued: 27.09.2021**Region:** GB**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name****Therminol 62**

Substance name

REACH registration no.

Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl

01-2119982984-16

Identification numbers

EC no.

915-589-8

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.

Reference to relevant exposure scenarios

For an overview of the exact titles of the relevant exposure scenarios please refer to section 16 of this SDS.

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@krahne.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)**

Aquatic Chronic 4; H413

Asp. Tox. 1; H304

Repr. 2; H361fd

Skin Irrit. 2; H315

STOT RE 2; H373o

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**

915-589-8 (Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl)

Hazard pictograms

GHS07



GHS08

Signal word

Danger

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H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
 H373 May cause damage to liver and thyroid through prolonged or repeated exposure if swallowed.
 H413 May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)

P201 Obtain special instructions before use.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 Wash skin thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 P331 Do NOT induce vomiting.

2.3 Other hazards

Contact with molten material may cause thermal burns. This product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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****Chemical characterization**

Substance name Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl

Identification numbers

EC no. 915-589-8

Other information

Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
-	-	M = 100	M = 10

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. In case of breathing difficulties give oxygen.

After skin contact

In case of contact with skin wash off immediately 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**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**

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Water mist; Carbon dioxide; Dry chemical extinguisher; Foam

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixtureIn 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****For non-emergency personnel**

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. Avoid contact with skin, eyes and clothing.

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. Observe information on personal protection equipment (see section 8). Transfer and handle only in enclosed systems. Provide suitable exhaust ventilation at the processing machines.

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. 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

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1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl			-	
	dermal	Long term (chronic)	systemic	0.54	mg/kg/day
	inhalative	Long term (chronic)	systemic	0.192	mg/m ³

DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl			-	
	oral	Long term (chronic)	systemic	0.02	mg/kg/day
	dermal	Long term (chronic)	systemic	0.19	mg/kg/day
	inhalative	Long term (chronic)	systemic	0.034	mg/m ³

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl		-	
	water	fresh water	0.126	µg/L
	water	marine water	0.013	µg/L
	water	fresh water sediment	1481.00	µg/kg
	with reference to: dry weight			
	water	marine water sediment	148.10	µg/kg
	with reference to: dry weight			
	soil	-	295.30	µg/kg
	with reference to: dry weight			
	sewage treatment plant	-	1.00	mg/L
	secondary poisoning	-	1.00	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 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. 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
liquid
Form/Colour
liquid
colourless
Odour
mild
pH value
No data available

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Boiling point / boiling range			
Value	333		°C
Melting point/freezing point			
No data available			
Decomposition temperature			
No data available			
Pour point			
Value	-42		°C
Flash point			
Value	160		°C
Method	Pensky-Martens closed cup		
Ignition temperature			
No data available			
Auto-ignition temperature			
Value	407		°C
Method	ASTM E 659		
Flammability			
No data available			
Lower explosion limit			
No data available			
Upper explosion limit			
No data available			
Vapour pressure			
Value	0.139	Pa	
Reference temperature	25	°C	
Relative vapour density			
No data available			
Relative density			
Value	0.95		
Reference temperature	25	°C	
Density			
Value	0.951	g/cm³	
Reference temperature	25	°C	
Solubility in water			
Value	0.012	mg/l	
Reference temperature	20	°C	
Solubility			
No data available			
Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
log Pow		6.67	
Source		ECHA	
Viscosity			
Value	10.7	mm²/s	
Reference temperature	40	°C	
Type	kinematic		
Value	103	mm²/s	
Reference temperature	0	°C	
Type	kinematic		
Value	2.52	mm²/s	
Reference temperature	100	°C	
Type	kinematic		
Value	10.1	mPa*s	
Reference temperature	40	°C	
Type	dynamic		
Particle characteristics			
No data available			

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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	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
LD50	>	5000	mg/kg bodyweight
Species	rat		
Source	ECHA		

Acute dermal toxicity

No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
LD50	>	5000	mg/kg bodyweight
Species	rabbit		
Source	ECHA		

Acute inhalational toxicity

No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
LC50	>	5.64	mg/l
Duration of exposure	4		h
State of aggregation	Dust/mist		
Species	rat		
Method	OECD 403		
Source	ECHA		

Skin corrosion/irritation

No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
Species	rabbit		
Source	ECHA		
Evaluation	irritant		

Serious eye damage/irritation

No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
Species	rabbit		
Source	ECHA		
Evaluation	non-irritant		

Respiratory or skin sensitisation

No	Substance name	CAS no.	EC no.
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1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl		-	915-589-8
Route of exposure			Skin	
Species			guinea pig	
Method			OECD 406	
Source			ECHA	
Evaluation			non-sensitizing	
Germ cell mutagenicity				
No	Substance name		CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl		-	915-589-8
Source			ECHA	
Evaluation/classification			Based on available data, the classification criteria are not met.	
Reproduction toxicity				
No	Substance name		CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl		-	915-589-8
Route of exposure			oral	
NOAEL			50	mg/kg bw/d
Species			rat	
Method			OECD 443	
Source			ECHA	
Evaluation/classification			Based on available data, the classification criteria are met.	
Carcinogenicity				
No data available				
STOT - single exposure				
No data available				
STOT - repeated exposure				
No	Substance name		CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl		-	915-589-8
Route of exposure			oral	
LOAEL			35	mg/kg
Species			rat	
Method			OECD 407	
Source			ECHA	
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**

Pursuant to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605, the product does not contain any endocrine disruptors in a concentration of 0.1% weight by weight and above.

Other information

No data available.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
LC50		0.00824	mg/l
Duration of exposure		96	h
Species		Oncorhynchus mykiss	
Source		ECHA	
Toxicity to fish (chronic)			
No data available			
Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	EC no.

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1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
EC50		0.00452	mg/l
Duration of exposure		48	h
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		

Toxicity to Daphnia (chronic)			
No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
NOEC		0.0063	mg/l
Duration of exposure		21	day(s)
Species	Daphnia magna		
Method	OECD 211		
Source	ECHA		

Toxicity to algae (acute)			
No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
EC50		0.0101	mg/l
Duration of exposure		72	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		

Toxicity to algae (chronic)			
No data available			

Bacteria toxicity			
No data available			

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	Reaction mass of diisopropyl biphenyl and triisopropyl biphenyl	-	915-589-8
log Pow		6.67	
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

Endocrine disrupting properties	
Pursuant to REACH Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Delegated Regulation (EU) 2018/605, the product does not contain any endocrine disruptors in a concentration of 0.1% weight by weight and above.	

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

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

Comments not applicable

Other regulations

Observe employment restrictions for child bearing mothers and nursing mothers.
Observe employment restrictions for women of child-bearing age.
Observe employment restrictions for young people.

National regulations**National chemical inventories**

USA (TSCA)

components listed respectively exempted from listing

ENCS (Japan)

ENCS/ISHL listed

ECL (Korea)

components listed respectively exempted from listing

AIIC (Australia)

AIIC: Not registered, for research purposes only

IECSC / NEPA (China)

components listed respectively exempted from listing

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.

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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)

H373o May cause damage to organs through prolonged or repeated exposure if swallowed.

List of existing exposition scenarios

ES001 Exposure scenario/s of the manufacturer

Creation of the safety data sheet

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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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