

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended



RODUTHERM 55

Creation date	01st January 2026	Version	1.0
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

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Substance / mixture

substance

Chemical name

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

CAS number

84961-70-6

EC (EINECS) number

284-660-7

Registration number

01-2119485843-26-XXXX

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

Substance's intended use

Heat transferring fluid.

Industrial uses.

Commercial uses.

The use descriptors

PC 16

Heat transfer fluids

Substance uses advised against

The product should not be used in ways other than those referred in Section 1. Do not use for private purposes.

1.3. Details of the supplier of the safety data sheet

Supplier

Name or trade name

Rodun International BV

Address

Productieweg 8, 3481MH, Harmelen
Nederland

Phone

+31 6 10275211

Web address

<https://rodun-int.com>

Competent person responsible for the safety data sheet

Name

Rodun International BV

Email

info@rodun-int.com

1.4. Emergency telephone number

GGIZ +31 6 1027 5211; 24 h, Monday - Sunday

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the substance in accordance with Regulation (EC) No 1272/2008

The substance is classified as dangerous.

Asp. Tox. 1, H304

Most serious adverse effects on human health and the environment

May be fatal if swallowed and enters airways.

2.2. Label elements

Hazard pictogram



Signal word

Danger

Hazard statements

H304

May be fatal if swallowed and enters airways.

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Precautionary statements

P301+P310 IF SWALLOWED: Immediately call a doctor.
P331 Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.

2.3. Other hazards

The substance does not have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended. Does not contain any PMT or vPvM components.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 84961-70-6 EC: 284-660-7 Registration number: 01-2119485843-26-XXXX	substance main component Benzene, mono-C10-13-alkyl derivs., distn. residues	>95	Asp. Tox. 1, H304	

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Do not perform artificial respiration without self-protection (e.g. a mask). Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Take care of your own safety, do not let the affected person walk! Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin

Take off contaminated clothing. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes.

If swallowed

Rinse the mouth. No vomiting. To consult a doctor immediately.

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

If inhaled

Cough, headache.

If on skin

Not expected.

If in eyes

Not expected.

If swallowed

Irritation, nausea.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale mist/vapours/spray.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not inhale mist/vapours/spray. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Store locked up.

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Storage class

10 - Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL

Benzene, mono-C10-13-alkyl derivs., distn. residues			
Workers / consumers	Route of exposure	Value	Effect
Workers	Dermal	4.3 mg/kg bw/day	Chronic effects systemic
Workers	Inhalation	3.2 mg/m ³	Chronic effects systemic

PNEC

Benzene, mono-C10-13-alkyl derivs., distn. residues	
Route of exposure	Value
Freshwater environment	0.00075 mg/l
Marine water	0.000075 mg/l
Freshwater environment	0.001 mg/l
Freshwater sediment	1.65 mg/kg of dry substance of soil
Sea sediments	0.165 mg/kg of dry substance of sediment
Soil (agricultural)	0.329 mg/kg
Microorganisms in sewage treatment	2 mg/l

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

It is not needed.

Skin protection

Hand protection: Protective gloves resistant to the product. Contaminated skin should be washed thoroughly.

Respiratory protection

Aerosol or fog formation: filter device (full mask or mouthpiece set) with filter: A2, A2/P2, Abek

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	data not available
Odour	characteristic
Melting point/freezing point	-54 °C (DIN ISO 3016)
Boiling point or initial boiling point and boiling range	351 °C

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Flammability	data not available
Lower and upper explosion limit	data not available
Flash point	180 °C (DIN EN ISO 2719)
Auto-ignition temperature	>340 °C
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	19 mm ² /s at 40 °C
Solubility in water	insoluble
Partition coefficient n-octanol/water (log value)	>4
Benzene, mono-C10-13-alkyl derivs., distn. residues (CAS: 84961-70-6)	7
Vapour pressure	< 0.001 kPa at 20 °C
Density and/or relative density	
Density	873 g/cm ³ at 20 °C (DIN 51757)
Relative vapour density	data not available
Particle characteristics	data not available

9.2. Other information

not available

SECTION 10: Stability and reactivity

10.1. Reactivity

The substance is non-flammable.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

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

No toxicological data is available for the substance.

Acute toxicity

Based on available data the classification criteria are not met.

Benzene, mono-C10-13-alkyl derivs., distn. residues						
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
Oral	LD ₅₀	OECD 401	>2000 mg/kg		Rat (Rattus norvegicus)	

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	Dermal	LD ₅₀	OECD 402	>2000 mg/kg		Rat (Rattus norvegicus)	

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

Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex
	EC ₁₀		>20 mg/l	72 hours	Bacteria	
Oral	NOAEL		45 mg/kg		Rat (Rattus norvegicus)	
Oral	LOAEL		360 mg/kg		Rat (Rattus norvegicus)	

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Irritation

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

Route of exposure	Result	Method	Exposure time	Species
Skin	Slightly irritating	OECD 404	4 hours	Rabbit
Skin	No effect	OECD 406		Guinea-pig (Cavia aperea f. porcellus)

Serious eye damage/irritation

No data available for the substance. Based on available data the classification criteria are not met.

Respiratory or skin sensitisation

No data available for the substance. Based on available data the classification criteria are not met.

Germ cell mutagenicity

No data available for the substance. Based on available data the classification criteria are not met.

Carcinogenicity

No data available for the substance. Based on available data the classification criteria are not met.

Reproductive toxicity

No data available for the substance. Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

No data available for the substance. Based on available data the classification criteria are not met.

Toxicity for specific target organ - repeated exposure

No data available for the substance. Based on available data the classification criteria are not met.

Aspiration hazard

May be fatal if swallowed and enters airways.

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11.2. Information on other hazards

Endocrine disrupting properties

Based on available data the classification criteria are not met. Does not contain any components that may cause endocrine disruption for humans.

Other information

not available

SECTION 12: Ecological information

12.1. Toxicity

Based on available data the classification criteria are not met.

Acute toxicity

Benzene, mono-C10-13-alkyl derivs., distn. residues				
Parameter	Value	Exposure time	Species	Environment
LC ₅₀	>1000 mg/l	96 hours	Fish (Oncorhynchus mykiss)	
EC ₅₀	>600 mg/l	48 hours	Daphnia (Daphnia magna)	
EC ₅₀	>1000 mg/l	72 hours	Algae (Selenastrum capricornutum)	
NOEC	0.0075 mg/l	21 days	Daphnia (Daphnia magna)	
LC ₅₀	>100 mg/l	96 hours	Fish	
NOEC	>10 µg/l	14 days	Fish	
NOEC	>0.1 mg/l	48 hours	Daphnia (Daphnia magna)	
NOEC	>2 mg/l	72 hours	Algae (Selenastrum capricornutum)	

12.2. Persistence and degradability

The following data are available.

Biodegradability

Benzene, mono-C10-13-alkyl derivs., distn. residues				
Parameter	Value	Exposure time	Environment	Result
	28 %	28 days		Biodegradable

12.3. Bioaccumulative potential

The following data are available.

Benzene, mono-C10-13-alkyl derivs., distn. residues	
Parameter	Value
	3.16

12.4. Mobility in soil

Based on available data the classification criteria are not met. Does not contain any PMT or vPvM components.

12.5. Results of PBT and vPvB assessment

Based on available data the classification criteria are not met. Does not contain any PBT or vPvB components.

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12.6. Endocrine disrupting properties

Based on available data the classification criteria are not met. Does not contain any components that may cause endocrine disruption in the environment.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Law on the placing on the market, return and high-quality recycling of packaging (Packaging Act - VerpackG) of June 9th, 2021, valid from January 1st, 2022. Ordinance on the European List of Waste (German Waste Catalogue Ordinance -Verordnung über das Europäische Abfallverzeichnis - AVV). Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number or ID number

not subject to transport regulations

14.2. UN proper shipping name

not relevant

14.3. Transport hazard class(es)

not relevant

14.4. Packing group

not relevant

14.5. Environmental hazards

not relevant

14.6. Special precautions for user

Reference in the Sections 4 to 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant

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SECTION 15: Regulatory information

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

Prevention Act. Ordinance on facilities for handling substances that are hazardous to water (AwSV) of 18 April 2017. Protection of Young Persons (Employment) Act (Child Labor Law - JArbSchG). Ordinance on protection against hazardous substances (Hazardous Substances Ordinance - GefStoffV). Technical Instructions on Air Quality Control. Act on protection against dangerous substances and preparations (Chemicals Act - ChemG). Ordinance to protect the climate from changes caused by the input of certain fluorinated greenhouse gases (Chemicals Climate Protection Ordinance - ChemKlimaschutzV). Act on the implementation of occupational safety and health measures to improve workplace safety and health. Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

National regulations (Germany)

WGK Water hazard class:

WGK 1 - slightly hazardous to water

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H304 May be fatal if swallowed and enters airways.

Guidelines for safe handling used in the safety data sheet

P301+P310 IF SWALLOWED: Immediately call a doctor.

P331 Do NOT induce vomiting.

P405 Store locked up.

P501 Dispose of contents/container to by handing over to the person authorized to dispose of waste or by returning to the supplier.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR Agreement concerning the international carriage of dangerous goods by road

AGW Occupational Exposure Limits

Asp. Tox. Aspiration hazard

BCF Bioconcentration Factor

CAS Chemical Abstracts Service

CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures

EC Identification code for each substance listed in EINECS

EC₁₀ Concentration of a substance when it is affected 10 % of the population

EC₅₀ Concentration of a substance when it is affected 50 % of the population

EINECS European Inventory of Existing Commercial Chemical Substances

EmS Emergency Response Procedures for Ships Carrying Dangerous Goods

EU European Union

EuPCS European Product Categorisation System

IATA International Air Transport Association

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IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEL	Lowest observed adverse effect level
log K _{ow}	Octanol-water partition coefficient
MAK	Maximum workplace concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
OEL	Occupational Exposure Limits
PBT	Persistent, bioaccumulative and toxic
PMT	Persistent, mobile and toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulation concerning the International Carriage of Dangerous Goods by Rail
UN number	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very persistent and very bioaccumulative
vPvM	Very persistent and very mobile

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.