

## Tert-butyl 2-ethylperoxyhexanoate

Version number: GHS 1.0

Date of compilation: 2020-01-21

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

#### 1.1 Product identifier

Identification of the substance	<b>Tert-butyl 2-ethylperoxyhexanoate</b>
Registration number (REACH)	this information is not available
CAS number	3006-82-4
Alternative name(s)	tert-butyl 2-ethylhexaneperoxoate
Article number	A0063285

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

Relevant identified uses	General use
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#### 1.3 Details of the supplier of the safety data sheet

Chemos GmbH & Co. KG  
Sonnenring 7  
84032 Altdorf  
Germany

Telephone: +49 871-966346-0  
Telefax: +49 871-966346-13  
e-mail: chemos@chemos.de  
Website: <http://www.chemos.de/>

e-mail (competent person)	chemos@chemos.de
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#### 1.4 Emergency telephone number

Emergency information service	+49 89 1 92 40
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Poison centre				
Country	Name	Postal code/ city	Telephone	Telefax
United Kingdom	National Poison Information Centre Medical Toxicology Unit	SE14 5ER Lon- don	+44 171 635 91 91	

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Section	Hazard class	Category	Hazard class and category	Hazard statement
2.15	organic peroxide	C	Org. Perox. C	H242
3.4S	skin sensitisation	1	Skin Sens. 1	H317
3.7	reproductive toxicity	1B	Repr. 1B	H360F
4.1A	hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects  
Spillage and fire water can cause pollution of watercourses.

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**2.2 Label elements**

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word danger

- Pictograms

GHS02, GHS07,  
GHS08, GHS09



- Hazard statements

H242 Heating may cause a fire.  
H317 May cause an allergic skin reaction.  
H360F May damage fertility.  
H410 Very toxic to aquatic life with long lasting effects.

- Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P234 Keep only in original packaging.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.  
P403 Store in a well-ventilated place.

**2.3 Other hazards**

This material is combustible, but will not ignite readily. Heating may cause a fire.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

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

**3.1 Substances**

Name of substance	tert-butyl 2-ethylperoxyhexanoate
Identifiers	
CAS No	3006-82-4
EC No	221-110-7
Molecular formula	C <sub>12</sub> H <sub>24</sub> O <sub>3</sub>
Molar mass	216.3 g/mol

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

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Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

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

Symptoms and effects are not known to date.

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO<sub>2</sub>)

Unsuitable extinguishing media

Water jet

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

Oxidising property.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

## SECTION 6: Accidental release measures

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

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

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

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Collect spillage: sawdust, kieselgur (diatomite), sand

Appropriate containment techniques

Use of adsorbent materials.

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Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas. Take any precaution to avoid mixing with combustibles.

- Handling of incompatible substances or mixtures

- Keep away from

Organic absorbing material, Pulp/paper

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

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

Managing of associated risks

- Flammability hazards

Keep valves and fittings free from oil and grease.

- Incompatible substances or mixtures

Keep/store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

### 7.3 Specific end use(s)

See section 16 for a general overview.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

This information is not available.

#### Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	9.8 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	5.6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

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**Environmental values**

Relevant PNECs and other threshold levels				
Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	0.002 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	0.64 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	0.622 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0.062 mg/kg	aquatic organisms	marine sediment	short-term (single instance)

**8.2 Exposure controls**

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

**SECTION 9: Physical and chemical properties**

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

**Appearance**

Physical state	liquid
Colour	colourless
Odour	characteristic

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### Other safety parameters

pH (value)	not determined
Melting point/freezing point	>-66.6 – <-66.2 °C at 1,013 hPa
Initial boiling point and boiling range	not determined
Flash point	78 °C at 1,013 hPa
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapour pressure	2 Pa at 20 °C
Density	0.9 g/cm <sup>3</sup> at 20 °C
Vapour density	this information is not available

### Solubility(ies)

- Water solubility	46.3 mg/l at 20 °C
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### Partition coefficient

- n-octanol/water (log KOW)	4.79 (25 °C) (ECHA)
- Soil organic carbon/water (log KOC)	3.511 (ECHA)

Auto-ignition temperature	not determined
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### Viscosity

- Kinematic viscosity	4.111 mm <sup>2</sup> /s at 20 °C
- Dynamic viscosity	3.7 mPa s at 20 °C

Explosive properties	none
Oxidising properties	oxidiser

### 9.2 Other information

Solvent content	100 %
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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". It's a reactive substance. The mixture contains reactive substance(s). Oxidising property.

#### 10.2 Chemical stability

See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

No known hazardous reactions.

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

Oxidisers, Combustible materials

#### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Classification according to GHS (1272/2008/EC, CLP)

##### Acute toxicity

Shall not be classified as acutely toxic.

##### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

##### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

##### Respiratory or skin sensitisation

May cause an allergic skin reaction.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

##### Carcinogenicity

Shall not be classified as carcinogenic.

##### Reproductive toxicity

May damage fertility.

##### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

##### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

##### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)			
Endpoint	Value	Species	Exposure time
LC50	8.66 mg/l	fish	96 h
EC50	9.9 mg/l	aquatic invertebrates	24 h
ErC50	0.439 mg/l	algae	72 h

Aquatic toxicity (chronic)			
Endpoint	Value	Species	Exposure time
EC50	1.02 mg/l	aquatic invertebrates	21 d

#### Biodegradation

The substance is readily biodegradable. The relevant substances of the mixture are readily biodegradable.

#### 12.2 Persistence and degradability

Process of degradability		
Process	Degradation rate	Time
oxygen depletion	65 %	28 d

#### 12.3 Bioaccumulative potential

The substance fulfils the very bioaccumulative criterion.

n-octanol/water (log KOW)	4.79 (25 °C) (ECHA)
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#### 12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient	3.511 (ECHA)
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#### 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Other adverse effects

Data are not available.



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**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

**Remarks**

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.


**SECTION 14: Transport information**

<b>14.1 UN number</b>	3113
<b>14.2 UN proper shipping name</b>	ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED
Technical name	tert-butyl 2-ethylperoxyhexanoate
<b>14.3 Transport hazard class(es)</b>	
Class	5.2 (organic peroxide) (environmentally hazardous)
<b>14.4 Packing group</b>	not assigned to a packing group
<b>14.5 Environmental hazards</b>	hazardous to the aquatic environment
<b>14.6 Special precautions for user</b>	
	Provisions for dangerous goods (ADR) should be complied within the premises.
<b>14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code</b>	
	The cargo is not intended to be carried in bulk.

**Information for each of the UN Model Regulations**

**Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)**

Carriage prohibited: RID

UN number	3113
Proper shipping name	ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED
Class	5.2
Classification code	P2
Danger label(s)	5.2, fish and tree
	
Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	122, 274
Excepted quantities (EQ)	E0
Limited quantities (LQ)	0

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Transport category (TC)	1
Tunnel restriction code (TRC)	D
Emergency Action Code	2WE
<b>International Maritime Dangerous Goods Code (IMDG)</b>	
UN number	3113
Proper shipping name	ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED
Class	5.2
Marine pollutant	yes (hazardous to the aquatic environment)
Danger label(s)	5.2, fish and tree
Special provisions (SP)	122, 195, 274, 923
Excepted quantities (EQ)	E0
Limited quantities (LQ)	0
EmS	F-F, S-R
Stowage category	D
<b>International Civil Aviation Organization (ICAO-IATA/DGR)</b>	
UN number	3113
Proper shipping name	Organic peroxide type C, liquid, temperature controlled
Class	5.2
Environmental hazards	yes (hazardous to the aquatic environment)

**SECTION 15: Regulatory information**

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

**Relevant provisions of the European Union (EU)**

**Deco-Paint Directive (2004/42/EC)**

VOC content	100 %
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**Directive on industrial emissions (VOCs, 2010/75/EU)**

VOC content	0 %
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**15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out for this substance.

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**SECTION 16: Other information**

**Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

**Key literature references and sources for data**

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

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**List of relevant phrases (code and full text as stated in chapter 2 and 3)**

Code	Text
H242	Heating may cause a fire.
H317	May cause an allergic skin reaction.
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

**Disclaimer**

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.