



TCI EUROPE N.V.

SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revision number: 1

Revision date: 10/02/2018

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

1.1 Product identifiers

Product name: Di-tert-butyl Peroxide
Product code: D3411

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

Identified uses: Reagents.

1.3 Details of the supplier of the safety data sheet

Supplier:

TCI EUROPE N.V.
Boerenveldseweg 6
Haven 1063
B-2070 Zwijndrecht
Telephone: +32(0)3 735 07 00
E-mail: sales-eu@tcichemicals.com

1.4 Emergency telephone number: +32(0)70 245 245

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Flammable liquids Category 2
Organic peroxides Type E

2.2 Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

H225-Highly flammable liquid and vapour.
H242-Heating may cause a fire.

Precautionary statements

P210-Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P220-Keep/Store away from clothing/combustible materials.
P233-Keep container tightly closed.
P234-Keep only in original container.
P280-Wear protective gloves, eye protection.
P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable
vPvB: Not applicable

SECTION 3: Composition/information on ingredients

3.1 Substances

Components: Di-tert-butyl Peroxide
Percent: >98.0%(GC)
CAS RN: 110-05-4
EC-No: 203-733-6
Synonyms: tert-Butyl Peroxide
Chemical Formula: C₈H₁₈O₂

SECTION 4: First aid measures

4.1 Description of first aid measures

| | |
|------------------------------------|--|
| Inhalation: | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell. |
| Skin contact: | Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. |
| Eye contact: | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Ingestion: | Get medical advice/attention if you feel unwell. Rinse mouth. |
| Protection of first-aiders: | A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles. |

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

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Dry chemical, foam, water spray, carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Explosion risk in case of fire. Fight fire remotely due to the risk of explosion. Carbon dioxide, Carbon monoxide

5.3 Advice for firefighters

Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so. When extinguishing fire, be sure to wear personal protective equipment

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use extra personal protective equipment (self-contained breathing apparatus). Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc

6.2 Environmental precautions

Prevent product from entering drains

6.3 Methods and materials for containment and cleaning up

Absorb spilled material in dry sand or inert absorbent before recovering it into an airtight container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations. Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment. Ensure all leaks are completely removed to prevent subsequent ignition.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling is performed in a well ventilated place. Wear suitable protective equipment. Be careful not to cause leakage, overflow, or dispersion. Steam should not be generated unnecessarily. Keep away from heat/sparks/open flame/hot surfaces. -No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Avoid shock and friction. Wash hands and face before breaks and immediately after handling the product. Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated. Avoid contact with skin, eyes and clothing. Don't leave used equipment or rag. This product may ignite if it is left stuck on combustibles such as paper, rags, etc.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store in an explosion-proof freezer. Be sure not to give the container unexpected impacts, such as falling down or falling off. Store away from other materials. Heat-sensitive

7.3 Specific end use(s)

No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

No data available

8.2 Exposure controls

Install a closed system or local exhaust. Also install safety shower and eye bath.

Respiratory protection:

Vapor respirator. Follow local and national regulations.

Hand protection:

Protective gloves.

Eye protection:

Safety glasses. A face-shield, if the situation requires.

Skin and body protection:

Protective clothing. Protective boots, if the situation requires.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

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| Physical state (20°C): | Liquid |
| Form: | Clear |
| Colour: | Colorless - Slightly pale yellow |
| Odour: | Characteristic |
| pH: | No data available |
| Melting point/freezing point: | -40°C |
| Boiling point/range: | 111°C |
| Flash point: | 12°C |
| Evaporation rate(Butyl Acetate=1): | No data available |
| Flammability(solid, gas): | No data available |
| Flammability or explosive limits: | |
| Lower: | No data available |
| Upper: | No data available |
| Vapour pressure: | 2.6kPa/20°C |
| Vapour density: | 5 |
| Relative density: | 0.80 |
| Solubility(ies): | |
| [Water] | Insoluble |
| [Other solvents] | |
| Soluble: | Acetone, Carbon tetrachloride, Many organic solvents |
| Partition coefficient: | 1 - 4 |
| n-octanol/water: | |
| Autoignition temperature: | 475°C |
| Decomposition temperature: | No data available |
| Dynamic Viscosity: | No data available |
| Kinematic viscosity: | No data available |

9.2 Other safety information No data available

SECTION 10: Stability and reactivity

10.1 Reactivity No data available

10.2 Chemical stability Stable under proper conditions.

10.3 Possibility of hazardous reactions May explosively decompose on heating, shock, friction, etc.

10.4 Conditions to avoid Heat, Spark, Open flame, Static discharge, Shock, Friction, Light

10.5 Incompatible materials Strong acids, Strong bases, Reducing agents, Combustibles, Organic materials, Metal powders

10.6 Hazardous decomposition products Carbon dioxide, Carbon monoxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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|------------------------------------|---|
| Acute Toxicity: | ihl-rat LC50:>4100 ppm/4H ipr-rat LD50:3210 mg/kg orl-rat LD50:>25 g/kg |
| Skin corrosion/irritation: | skn-rbt 500 mg |
| Serious eye damage/irritation: | eye-rbt 500 mg/24H MLD |
| Respiratory or skin sensitization: | No data available |
| Germ cell mutagenicity: | No data available |
| Carcinogenicity: | unr-mus TDLo:585 mg/kg |
| IARC = | No data available |
| NTP = | No data available |
| Reproductive toxicity: | ihl-rat TCLo:226 mg/m ³ /4H (1-19D preg) |
| STOT-single exposure: | No data available |
| STOT-repeated exposure: | No data available |
| Aspiration hazard: | No data available |
| RTECS Number: | ER2450000 |

SECTION 12: Ecological information

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|--|--------------------------|
| 12.1 Toxicity | |
| Fish: | No data available |
| Crustacea: | No data available |
| Algae: | No data available |
| 12.2 Persistence and degradability | 0% (by BOD) , 0% (by GC) |
| 12.3 Bioaccumulative potential | 250 |
| 12.4 Mobility in soil | |
| Log Pow: | 1 - 4 |
| Soil adsorption (Koc): | 720 |
| Henry's Law (PaM³/mol): | 121.5 |
| 12.5 Results of PBT and vPvB assessment | |
| PBT: | Not applicable |
| vPvB: | Not applicable |
| 12.6 Other adverse effects | No data available |

SECTION 13: Disposal considerations

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|-------------------------------------|---|
| 13.1 Waste treatment methods | Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. Observe all federal, state and local regulations when disposing of the substance. |
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SECTION 14: Transport information

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|--|---------------------------------|
| 14.1 UN number | 3107 |
| 14.2 UN proper shipping name | |
| ADR/RID | Organic peroxide type E, liquid |
| IMDG/IMO | Organic peroxide type E, liquid |
| ICAO/IATA | Organic peroxide type E, liquid |
| 14.3 Transport hazard class(es) | |
| ADR/RID | 5.2: Organic peroxide |
| IMDG/IMO | 5.2: Organic peroxide |
| ICAO/IATA | 5.2: Organic peroxide |
| 14.4 Packaging group | |
| ADR/RID | - |
| IMDG/IMO | - |
| ICAO/IATA | - |
| 14.5 Environmental hazards | |
| Marine pollutant | - |
| 14.6 Special precautions for user | No data available |

SECTION 15: Regulatory information

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| 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| Water Hazard Classes (WGK) : | Class 1 - Low hazard to waters |
| Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No.1907/2006 | Not listed |
| 15.2 Chemical safety assessment | A chemical safety assessment has not been carried out. |

SECTION 16: Other information

Prepared by: TCI EUROPE N.V.
Issue date: 10/02/2018

This SDS was prepared sincerely on the basis of the information we could obtain, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

End of Safety Data Sheet