

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## DTBP

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: 23.10.2020  |
| 3.1     | 11.03.2021     | 600000000009 | Date of first issue: 15.03.2016 |

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

#### 1.1 Product identifier

Trade name : DTBP

REACH Registration Number : 01-2119513335-48-0001

Substance name : Di-tert-butyl peroxide

Index-No. : 617-001-00-2

EC-No. : 203-733-6

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

Use of the Sub-  
stance/Mixture : polymerisation initiators

#### 1.3 Details of the supplier of the safety data sheet

Company : United Initiators GmbH  
Dr.-Gustav-Adolph-Str. 3  
82049 Pullach

Telephone : +49 / 89 / 74422 – 0

E-mail address of person  
responsible for the SDS : contact@united-in.com

#### 1.4 Emergency telephone number

+49 / 89 / 74422 – 0 (24 h)

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

|  |  |
|--|--|
| Flammable liquids, Category 2                  | H225: Highly flammable liquid and vapour.                |
| Organic peroxides, Type E                      | H242: Heating may cause a fire.                          |
| Germ cell mutagenicity, Category 2             | H341: Suspected of causing genetic defects.              |
| Long-term (chronic) aquatic hazard, Category 3 | H412: Harmful to aquatic life with long lasting effects. |

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### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements : H225 Highly flammable liquid and vapour.  
H242 Heating may cause a fire.  
H341 Suspected of causing genetic defects.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P220 Keep/Store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials.  
P233 Keep container tightly closed.  
P235 Keep cool.  
P243 Take action to prevent static discharges.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

**Storage:**  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

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Substance name : Di-tert-butyl peroxide  
Index-No. : 617-001-00-2  
EC-No. : 203-733-6  
Chemical nature : Organic Peroxide  
liquid

### Components

| Chemical name          | CAS-No.<br>EC-No.     | Concentration (% w/w) |
|------------------------|-----------------------|-----------------------|
| Di-tert-butyl peroxide | 110-05-4<br>203-733-6 | <= 100                |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.  
Call a physician immediately.

Protection of first-aiders : First Aid responders should pay attention to self-protection  
and use the recommended protective clothing

If inhaled : If unconscious, place in recovery position and seek medical  
advice.  
If symptoms persist, call a physician.  
If breathed in, move person into fresh air.

In case of skin contact : Wash contaminated clothing before re-use.  
If on skin, rinse well with water.  
If on clothes, remove clothes.  
If symptoms persist, call a physician.

In case of eye contact : In the case of contact with eyes, rinse immediately with plenty  
of water and seek medical advice.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.  
Call a physician immediately.

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

Risks : Suspected of causing genetic defects.

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

Treatment : Treat symptomatically and supportively.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray jet  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : High volume water jet

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

Specific hazards during fire-fighting : Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite.  
The product burns violently.  
Flash back possible over considerable distance.  
Vapours may form explosive mixtures with air.  
The product will float on water and can be reignited on surface water.  
Cool closed containers exposed to fire with water spray.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

Specific extinguishing methods : Do not use a solid water stream as it may scatter and spread fire.  
Remove undamaged containers from fire area if it is safe to do so.  
Use water spray to cool unopened containers.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.

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Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.  
Follow safe handling advice and personal protective equipment recommendations.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  
Never return spills in original containers for re-use.  
Treat recovered material as described in the section "Disposal considerations".

### 6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Methods for cleaning up : Contact with incompatible substances can cause decomposition at or below SADT.  
Clear spills immediately.  
Suppress (knock down) gases/vapours/mists with a water spray jet.  
To clean the floor and all objects contaminated by this material, use plenty of water.  
Soak up with inert absorbent material.  
Isolate waste and do not reuse.  
Non-sparking tools should be used.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

### 6.4 Reference to other sections

For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Advice on safe handling : Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
Avoid formation of aerosol.  
Take precautionary measures against static discharges.  
Never return any product to the container from which it was originally removed.

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Provide sufficient air exchange and/or exhaust in work rooms.  
Avoid confinement.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Smoking, eating and drinking should be prohibited in the application area.  
Wash thoroughly after handling.  
For personal protection see section 8.  
Protect from contamination.

Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Keep away from heat and sources of ignition. Use only explosion-proof equipment. Keep away from combustible material.

Hygiene measures : Keep away from food and drink. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

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

Requirements for storage areas and containers : Avoid impurities (e.g. rust, dust, ash), risk of decomposition. Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Store in accordance with the particular national regulations.

Advice on common storage : Keep away from strong acids, bases, heavy metal salts and other reducing substances.

Storage class (TRGS 510) : 5.2, Organic peroxides and self-reacting hazardous materials

Recommended storage temperature : < 40 °C

Further information on storage stability : No decomposition if stored normally.

### 7.3 Specific end use(s)

Specific use(s) : For further information, refer to the product technical data sheet.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

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| Substance name         | End Use | Exposure routes | Potential health effects   | Value                |
|------------------------|---------|-----------------|----------------------------|----------------------|
| Di-tert-butyl peroxide | Workers | Inhalation      | Long-term systemic effects | 20 mg/m <sup>3</sup> |
|                        | Workers | Skin contact    | Long-term systemic effects | 3 mg/kg              |

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

| Substance name         | Environmental Compartment | Value                       |
|------------------------|---------------------------|-----------------------------|
| Di-tert-butyl peroxide | Fresh water               | 0,144 mg/l                  |
|                        | Marine water              | 0,0144 mg/l                 |
|                        | Fresh water sediment      | 15 mg/kg dry weight (d.w.)  |
|                        | Marine sediment           | 1,5 mg/kg dry weight (d.w.) |
|                        | Sewage treatment plant    | 10 mg/l                     |
|                        | Soil                      | 2,94 mg/l                   |

## 8.2 Exposure controls

### Engineering measures

Minimize workplace exposure concentrations.

### Personal protective equipment

Eye protection : Tightly fitting safety goggles  
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.  
Ensure that eyewash stations and safety showers are close to the workstation location.

### Hand protection

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0,4 mm

Material : butyl-rubber  
Break through time : 120 min  
Glove thickness : 0,5 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

Respiratory protection : In the case of dust or aerosol formation use respirator with an

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approved filter.

Filter type : ABEK-filter

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |   |  |
|--|---|--|
| Appearance                                       | : | liquid   |
| Colour   | : | colourless   |
| Odour  | : | aromatic   |
| Odour Threshold                                  | : | No data available                                  |
| pH   | : | No data available                                  |
| Melting point/freezing point                     | : | < -25 °C   |
| Boiling point/boiling range                      | : | Decomposition: Decomposes below the boiling point. |
| Flash point                                      | : | 0 °C<br>Method: ISO 3679, closed cup               |
| Evaporation rate                                 | : | No data available                                  |
| Flammability (solid, gas)                        | : | Not applicable                                     |
| Upper explosion limit / Upper flammability limit | : | Upper explosion limit<br>100 %(V)<br>( 45 °C)      |
| Lower explosion limit / Lower flammability limit | : | Lower explosion limit<br>0,74 %(V)                 |
| Vapour pressure                                  | : | 35 hPa (20 °C)                                     |
| Relative vapour density                          | : | No data available                                  |
| Density  | : | 0,79 g/cm <sup>3</sup> (20 °C)                     |
| Solubility(ies)                                  | : |  |
| Water solubility                                 | : | 0,171 g/l practically insoluble (20 °C)<br>pH: 8,1 |
| Partition coefficient: n-octanol/water           | : | log Pow: 3,2 (22 °C)                               |
| Viscosity  | : |  |
| Viscosity, dynamic                               | : | 0,8 mPa.s (20 °C)                                  |



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Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.  
Organic peroxide

### 9.2 Other information

Self-Accelerating decomposition temperature (SADT) : 80 °C  
Method: UN-Test H.4  
SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.

Flammability (liquids) : Highly flammable

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Stable under recommended storage conditions.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Vapours may form explosive mixture with air.

### 10.4 Conditions to avoid

Conditions to avoid : Protect from contamination.  
Contact with incompatible substances can cause decomposition at or below SADT.  
Heat, flames and sparks.  
Avoid confinement.

### 10.5 Incompatible materials

Materials to avoid : Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

### 10.6 Hazardous decomposition products

Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Not classified based on available information.

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### Product:

- Acute oral toxicity : LD50 (Rat, female): > 2.000 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (Rat, male and female): > 22 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 436  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### Components:

#### **Di-tert-butyl peroxide:**

- Acute oral toxicity : LD50 (Rat, female): > 2.000 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (Rat, male and female): > 22 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 436  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### **Skin corrosion/irritation**

Not classified based on available information.

### Product:

- Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

### Components:

#### **Di-tert-butyl peroxide:**

- Species : Rabbit

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Method : OECD Test Guideline 404  
Result : No skin irritation

### **Serious eye damage/eye irritation**

Not classified based on available information.

#### **Product:**

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : No eye irritation

#### **Components:**

##### **Di-tert-butyl peroxide:**

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : No eye irritation

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

Not classified based on available information.

#### **Respiratory sensitisation**

Not classified based on available information.

#### **Product:**

Test Type : Buehler Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Does not cause skin sensitisation.

#### **Components:**

##### **Di-tert-butyl peroxide:**

Test Type : Buehler Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Does not cause skin sensitisation.

### **Germ cell mutagenicity**

Suspected of causing genetic defects.

#### **Product:**

Genotoxicity in vitro : Test Type: Ames test  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

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Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse (male and female)  
Method: OECD Test Guideline 474  
Result: positive

Germ cell mutagenicity- Assessment : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests., The GHS classification specified by the authority

### Components:

#### **Di-tert-butyl peroxide:**

Genotoxicity in vitro : Test Type: Ames test  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse (male and female)  
Method: OECD Test Guideline 474  
Result: positive

Germ cell mutagenicity- Assessment : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests., The GHS classification specified by the authority

### **Carcinogenicity**

Not classified based on available information.

### Product:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

### Components:

#### **Di-tert-butyl peroxide:**

Remarks : Not classified due to data which are conclusive although insufficient for classification.

### **Reproductive toxicity**

Not classified based on available information.

### Product:

Effects on fertility : Species: Rat, male and female  
Application Route: Oral  
General Toxicity F1: NOEL: 1.000 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: No effects on reproduction parameters, No effects on foetal development

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Effects on foetal development : Species: Rat, female  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 1.000 mg/kg body weight  
Method: OECD Test Guideline 414

Species: Rat, male and female  
Application Route: Oral  
General Toxicity Maternal: NOEL: 1.000 mg/kg body weight  
Symptoms: No effects on reproduction parameters, No effects on foetal development  
Method: OECD Test Guideline 422

### Components:

#### **Di-tert-butyl peroxide:**

Effects on fertility : Species: Rat, male and female  
Application Route: Oral  
General Toxicity F1: NOEL: 1.000 mg/kg body weight  
Symptoms: No effects on reproduction parameters, No effects on foetal development  
Method: OECD Test Guideline 422  
Result: No effects on reproduction parameters

Effects on foetal development : Species: Rat, female  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 1.000 mg/kg body weight  
Method: OECD Test Guideline 414

Species: Rat, male and female  
Application Route: Oral  
General Toxicity Maternal: NOEL: 1.000 mg/kg body weight  
Symptoms: No effects on reproduction parameters, No effects on foetal development  
Method: OECD Test Guideline 422

#### **STOT - single exposure**

Not classified based on available information.

### Product:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

### Components:

#### **Di-tert-butyl peroxide:**

Remarks : Not classified due to data which are conclusive although insufficient for classification.

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### STOT - repeated exposure

Not classified based on available information.

#### Product:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

#### Components:

##### Di-tert-butyl peroxide:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

### Repeated dose toxicity

#### Product:

Species : Rat, male and female  
NOAEL : 100 mg/kg  
LOAEL : 300 mg/kg  
Application Route : Oral  
Exposure time : 28 d  
Method : OECD Test Guideline 422

Species : Rat, male and female  
NOAEC : 993 mg/m<sup>3</sup>  
Application Route : Inhalation  
Test atmosphere : vapour  
Exposure time : 90 d  
Method : OECD Test Guideline 413

#### Components:

##### Di-tert-butyl peroxide:

Species : Rat, male and female  
NOAEL : 100 mg/kg  
LOAEL : 300 mg/kg  
Application Route : Oral  
Exposure time : 28 d  
Method : OECD Test Guideline 422

Species : Rat, male and female  
NOAEC : 993 mg/m<sup>3</sup>  
Application Route : Inhalation  
Test atmosphere : vapour  
Exposure time : 90 d  
Method : OECD Test Guideline 413

### Aspiration toxicity

Not classified based on available information.

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### Product:

Not classified due to data which are conclusive although insufficient for classification.

### Components:

#### **Di-tert-butyl peroxide:**

Not classified due to data which are conclusive although insufficient for classification.

### **Further information**

#### Product:

Remarks : Solvents may degrease the skin.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

- Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 1.000 mg/l  
Exposure time: 96 h  
Remarks: Expert judgement  
No toxicity at the limit of solubility
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 73,1 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 36 mg/l  
End point: Growth rate  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 7,2 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211
- Toxicity to microorganisms : EC50 (Bacteria): 1.000 mg/l  
Exposure time: 0,5 h  
Method: OECD Test Guideline 209

#### **Ecotoxicology Assessment**

- Acute aquatic toxicity : Harmful to aquatic life.
- Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

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### Components:

#### **Di-tert-butyl peroxide:**

- Toxicity to fish : LC50 (Poecilia reticulata (guppy)): > 1.000 mg/l  
Exposure time: 96 h  
Remarks: Expert judgement  
No toxicity at the limit of solubility
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 73,1 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 36 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC50 (Bacteria): 1.000 mg/l  
Exposure time: 0,5 h  
Method: OECD Test Guideline 209
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 7,2 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

#### **Ecotoxicology Assessment**

- Acute aquatic toxicity : Harmful to aquatic life.
- Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

### **12.2 Persistence and degradability**

#### Product:

- Biodegradability : Result: Not readily biodegradable.  
Method: OECD Test Guideline 301D

#### Components:

#### **Di-tert-butyl peroxide:**

- Biodegradability : Result: Not readily biodegradable.  
Method: OECD Test Guideline 301D

### **12.3 Bioaccumulative potential**

#### Components:

#### **Di-tert-butyl peroxide:**

- Partition coefficient: n-octanol/water : log Pow: 3,2 (22 °C)



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### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

### 12.6 Other adverse effects

**Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life with long lasting effects.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Dispose of wastes in an approved waste disposal facility.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.  
Dispose of in accordance with local regulations.

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## SECTION 14: Transport information

### 14.1 UN number

ADR : UN 3107  
RID : UN 3107  
IMDG : UN 3107  
IATA : UN 3107

### 14.2 UN proper shipping name

ADR : ORGANIC PEROXIDE TYPE E, LIQUID  
(DI-tert-BUTYL PEROXIDE)  
RID : ORGANIC PEROXIDE TYPE E, LIQUID

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**IMDG** : (DI-tert-BUTYL PEROXIDE)  
: ORGANIC PEROXIDE TYPE E, LIQUID  
(DI-tert-BUTYL PEROXIDE)

**IATA** : Organic peroxide type E, liquid  
(Di-tert-Butyl peroxide)

### 14.3 Transport hazard class(es)

**ADR** : 5.2  
**RID** : 5.2  
**IMDG** : 5.2  
**IATA** : 5.2

### 14.4 Packing group

**ADR**  
Packing group : Not assigned by regulation  
Classification Code : P1  
Labels : 5.2  
Tunnel restriction code : (D)

**RID**  
Packing group : Not assigned by regulation  
Classification Code : P1  
Hazard Identification Number : 539  
Labels : 5.2

**IMDG**  
Packing group : Not assigned by regulation  
Labels : 5.2  
EmS Code : F-J, S-R

**IATA (Cargo)**  
Packing instruction (cargo aircraft) : 570  
Packing group : Not assigned by regulation  
Labels : Organic Peroxides, Keep Away From Heat

**IATA (Passenger)**  
Packing instruction (passenger aircraft) : 570  
Packing group : Not assigned by regulation  
Labels : Organic Peroxides, Keep Away From Heat

### 14.5 Environmental hazards

**ADR**  
Environmentally hazardous : no

**RID**  
Environmentally hazardous : no

**IMDG**  
Marine pollutant : no

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### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

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## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Conditions of restriction for the following entries should be considered: Number on list 40, 3

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

|     |   |                    |                     |
|-----|---|--------------------|---------------------|
| P6b | SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES | Quantity 1<br>50 t | Quantity 2<br>200 t |
|-----|---|--------------------|---------------------|

Water contaminating class (Germany) : WGK 1 slightly hazardous to water  
Code Number: 1.103  
Classification according to AwSV, Annex 1 (4) (German regulatory requirements)

### Other regulations:

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Gefahrgruppe nach DGUV 13 Vorschrift 13 (bisher BGV B4): Ib (German regulatory requirements)

The product is subject to the supply restrictions of the Ordinance on the Prohibition of Chemicals.

Take note of Law on the protection of mothers at work, in education and in studies (Maternity Protection Act - MuSchG).

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### The components of this product are reported in the following inventories:

|            |  |
|------------|--|
| TCSI (TW)  | : On the inventory, or in compliance with the inventory  |
| TSCA (US)  | : All substances listed as active on the TSCA inventory  |
| AICS (AU)  | : On the inventory, or in compliance with the inventory  |
| DSL (CA)   | : All components of this product are on the Canadian DSL |
| ENCS (JP)  | : On the inventory, or in compliance with the inventory  |
| ISHL (JP)  | : On the inventory, or in compliance with the inventory  |
| KECI (KR)  | : On the inventory, or in compliance with the inventory  |
| PICCS (PH) | : On the inventory, or in compliance with the inventory  |
| IECSC (CN) | : On the inventory, or in compliance with the inventory  |
| NZIoC (NZ) | : On the inventory, or in compliance with the inventory  |

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.  
For further information see eSDS.

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## SECTION 16: Other information

### Further information

|   |  |
|---|--|
| Other information   | : This safety datasheet only contains information relating to safety and does not replace any product information or product specification.<br>These safety instructions also apply to empty packaging which may still contain product residues. |
| Sources of key data used to compile the Safety Data Sheet | : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>  |

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### Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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