

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## DYBP-85-WO

|         |                |              |                                 |
|---------|----------------|--------------|---------------------------------|
| Version | Revision Date: | SDS Number:  | Date of last issue: 08.03.2023  |
| 2.3     | 31.07.2024     | 600000000177 | Date of first issue: 27.06.2016 |

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

#### 1.1 Product identifier

Trade name : DYBP-85-WO

Unique Formula Identifier (UFI) : 8C89-60XV-Y00R-UJ44

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

Use of the Substance/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

0800 000 7801 (toll-free, access from Germany only) +49 89 220 61012

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Organic peroxides, Type C H242: Heating may cause a fire.

Long-term (chronic) aquatic hazard, Category 2 H411: Toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

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

Hazard pictograms :



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Signal word : Danger

Hazard statements : H242 Heating may cause a fire.  
H411 Toxic 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.  
P234 Keep only in original packaging.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

**Response:**  
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.  
P391 Collect spillage.

### 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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Organic Peroxide  
Liquid mixture

#### Components

| Chemical name  | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification                                    | Concentration<br>(% w/w) |
|--|---|---|--------------------------|
| di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide | 1068-27-5<br>213-944-5<br>01-2120752828-41-0000       | Org. Perox. B; H241<br>Aquatic Chronic 2;<br>H411 | >= 80 - < 85             |

For explanation of abbreviations see section 16.

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### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : Take off contaminated clothing and shoes immediately.  
Never give anything by mouth to an unconscious person.  
If unconscious, place in recovery position and seek medical advice.  
Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
- If inhaled : Administer oxygen if breathing is difficult or cyanosis is observed.  
If breathed in, move person into fresh air.  
If not breathing, give artificial respiration.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If symptoms persist, call a physician.  
Wash contaminated clothing before re-use.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- 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.  
If symptoms persist, call a physician.

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

None known.

#### 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 : Risk of explosion if heated under confinement.  
Possible emission of gaseous decomposition products may lead to a dangerous pressure build-up.  
Avoid confinement.  
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.  
Do not allow run-off from fire fighting to enter drains or water courses.  
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 : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use a water spray to cool fully closed containers.  
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.

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### SECTION 6: Accidental release measures

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

Personal precautions : Follow safe handling advice and personal protective equipment recommendations.  
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.  
Use personal protective equipment.  
Remove all sources of ignition.  
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

See sections: 7, 8, 11, 12 and 13.

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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 : Open drum carefully as content may be under pressure.  
Protect from contamination.  
Do not breathe vapours/dust.

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Avoid formation of aerosol.  
Take precautionary measures against static discharges.  
Never return any product to the container from which it was originally removed.  
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.

- 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 open flames, hot surfaces and sources of ignition. Keep away from combustible material. Do not spray on a naked flame or any incandescent material.
- Hygiene measures : Avoid contact with skin, eyes and clothing. 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 : Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Store in cool place. Keep in a well-ventilated place. Contamination may result in dangerous pressure increases - closed containers may rupture. Observe label precautions. Store in accordance with the particular national regulations. 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.
- Advice on common storage : Keep away from combustible materials.  
Keep away from strong acids, bases, heavy metal salts and other reducing substances.
- Storage class (TRGS 510) : 5.2
- Recommended storage temperature : 10 - 40 °C
- Further information on storage stability : Stable under recommended storage conditions.

### 7.3 Specific end use(s)

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

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational Exposure Limits

| Components                    | CAS-No.  | Value type (Form of exposure) | Control parameters  | Basis       |
|-------------------------------|--|-------------------------------|---------------------|-------------|
| White mineral oil (petroleum) | 8042-47-5  | AGW (Alveolate fraction)      | 5 mg/m <sup>3</sup> | DE TRGS 900 |
|                               | Peak-limit: excursion factor (category): 4;(II)  |                               |                     |             |
|                               | Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child |                               |                     |             |

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

| Substance name   | End Use | Exposure routes | Potential health effects   | Value                   |
|--|---------|-----------------|----------------------------|-------------------------|
| di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide | Workers | Inhalation      | Long-term systemic effects | 10,58 mg/m <sup>3</sup> |
|  | Workers | Skin contact    | Long-term systemic effects | 15 mg/kg                |

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

| Substance name   | Environmental Compartment | Value         |
|--|---------------------------|---------------|
| di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide | Fresh water               | 0,00617 mg/l  |
|  | Intermittent use/release  | 0,0617 mg/l   |
|  | Marine water              | 0,000617 mg/l |
|  | Intermittent use/release  | 0,0617 mg/l   |
|  | Fresh water sediment      | 7,12 mg/kg    |
|  | Marine sediment           | 0,71 mg/kg    |
|  | Sewage treatment plant    | 100 mg/l      |
|  | Soil                      | 1 mg/l        |

#### 8.2 Exposure controls

##### Engineering measures

Minimize workplace exposure concentrations.

##### Personal protective equipment

Eye/face protection : Ensure that eyewash stations and safety showers are close to the workstation location.  
Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.  
Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

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Tightly fitting safety goggles  
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.

Equipment should conform to EN 166

### Hand protection

Material : Nitrile rubber  
Break through time : 480 min  
Glove thickness : 0,40 mm  
Directive : Equipment should conform to EN 374

Material : butyl-rubber  
Break through time : 480 min  
Glove thickness : 0,47 mm  
Directive : Equipment should conform to EN 374

Remarks : The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the protective glove. 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.  
Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.  
Wear as appropriate:  
Flame retardant antistatic protective clothing.

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.  
Respirator with combination filter for vapour/particulate (EN 141)

Filter type : ABEK-filter

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.



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### SECTION 9: Physical and chemical properties

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

|  |   |  |
|--|---|--|
| Physical state                                     | : | liquid   |
| Colour   | : | light yellow   |
| Odour  | : | characteristic   |
| Odour Threshold                                    | : | No data available  |
| Melting point/range                                | : | < -20 °C   |
| Boiling point/boiling range                        | : | Decomposition: Decomposes below the boiling point.   |
| Flammability                                       | : | Not applicable<br>Remarks: Organic peroxide  |
| Upper explosion limit / Upper flammability limit   | : | Upper explosion limit<br>No data available   |
| Lower explosion limit / Lower flammability limit   | : | Lower explosion limit<br>No data available   |
| Flash point  | : | 69 °C<br>Method: closed cup  |
| Auto-ignition temperature                          | : | not determined   |
| Self-Accelerating decomposition temperature (SADT) | : | 80 °C<br>Method: UN-Test H.4<br>SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction. |
| pH   | : | substance/mixture is non-soluble (in water)  |

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### Viscosity

Viscosity, dynamic : 11 mPa.s (20 °C)

Viscosity, kinematic : not determined

### Solubility(ies)

Water solubility : practically insoluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : log Pow: 6,71 (25 °C)

Vapour pressure : < 0,01 hPa (20 °C)

Relative density : not determined

Density : ca. 0,88 g/cm<sup>3</sup> (20 °C)

### 9.2 Other information

Explosives : Not explosive  
In use, may form flammable/explosive vapour-air mixture.

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

Self-ignition : The substance or mixture is not classified as pyrophoric.

Self-heating substances : The substance or mixture is not classified as self heating.

Substances and mixtures, which in contact with water, emit flammable gases : The substance or mixture does not emit flammable gases in contact with water.

Desensitised explosives : Not applicable

Evaporation rate : No data available

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Refractive index : 1,437 at 20 °C

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Stable under recommended storage conditions.  
Heating may cause a fire or explosion.

#### 10.2 Chemical stability

Stable under recommended storage conditions.  
No decomposition if stored normally.

#### 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 hazard classes as defined in Regulation (EC) No 1272/2008

##### Acute toxicity

Not classified due to lack of data.

##### Product:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 423

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Assessment: The substance or mixture has no acute oral toxicity

Remarks: No mortality observed at this dose.

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: No mortality observed at this dose.

### Components:

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity  
Remarks: No mortality observed at this dose.

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: No mortality observed at this dose.

### **Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

### Product:

Method : OECD Test Guideline 404  
Result : No skin irritation

### Components:

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Method : OECD Test Guideline 404  
Result : No skin irritation

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

Based on available data, the classification criteria are not met.

### Product:

Method : OECD Test Guideline 405  
Result : No eye irritation

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### Components:

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Method : OECD Test Guideline 405  
Result : No eye irritation

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

Based on available data, the classification criteria are not met.

#### **Respiratory sensitisation**

Not classified due to lack of data.

### Product:

Result : Does not cause skin sensitisation.

### Components:

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Result : Does not cause skin sensitisation.

### **Germ cell mutagenicity**

Not classified due to lack of data.

### Product:

Genotoxicity in vitro : Test Type: reverse mutation assay  
Method: OECD Test Guideline 473  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Remarks: No data available

### Components:

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Method: OECD Test Guideline 473  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Remarks: No data available

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### **Carcinogenicity**

Not classified due to lack of data.

### **Components:**

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Remarks : This information is not available.

### **Reproductive toxicity**

Not classified due to lack of data.

### **Product:**

Effects on foetal development : Species: Rat  
Application Route: Oral  
Developmental Toxicity: NOAEL: 300 mg/kg body weight  
Method: OECD Test Guideline 414  
Remarks: No data available

### **Components:**

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Effects on foetal development : Species: Rat  
Application Route: Oral  
Developmental Toxicity: NOAEL: 300 mg/kg body weight  
Method: OECD Test Guideline 414  
Remarks: No data available

### **STOT - single exposure**

Not classified due to lack of data.

### **STOT - repeated exposure**

Not classified due to lack of data.

### **Repeated dose toxicity**

### **Product:**

Species : Rat  
NOAEL : 150 mg/kg  
Application Route : Oral  
Exposure time : 90 d  
Remarks : Based on data from similar materials

### **Components:**

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Species : Rat  
NOAEL : 150 mg/kg  
Application Route : Oral  
Exposure time : 90 d

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Remarks : Based on data from similar materials

### Aspiration toxicity

Not classified due to lack of data.

## 11.2 Information on other hazards

### Endocrine disrupting properties

#### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### Further information

#### Product:

Remarks : No data available

#### Components:

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Remarks : No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : NOEC (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other : EC50 (Daphnia (water flea)): > 5,31 mg/l  
aquatic invertebrates : Exposure time: 48 h  
Remarks: No toxicity at the limit of solubility

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): 6,17  
plants : mg/l  
Exposure time: 72 h

#### Components:

#### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Toxicity to fish : NOEC (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h

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Test Type: semi-static test  
Method: OECD Test Guideline 203  
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): > 5,31 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 6,17 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition  
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 1,88 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition  
Method: OECD Test Guideline 201

Toxicity to microorganisms : NOEC : > 1.000 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition of activated sludge  
Method: OECD Test Guideline 209

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Result: Not rapidly biodegradable

#### Components:

##### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Biodegradability : Result: Not rapidly biodegradable  
Method: OECD Test Guideline 301

### 12.3 Bioaccumulative potential

#### Components:

##### **di-tert-butyl 1,1,4,4-tetramethylbut-2-yn-1,4-ylene diperoxide:**

Partition coefficient: n-octanol/water : log Pow: > 6,5

### 12.4 Mobility in soil

No data available



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### 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 Endocrine disrupting properties

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

**Product:**

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

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of wastes in an approved waste disposal facility.  
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.

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.  
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging : Dispose of in accordance with local regulations.  
Clean container with water.  
Dispose of contents/ container to an approved waste disposal plant.  
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.

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### SECTION 14: Transport information

#### 14.1 UN number or ID number

|      |   |         |
|------|---|---------|
| ADN  | : | UN 3103 |
| ADR  | : | UN 3103 |
| RID  | : | UN 3103 |
| IMDG | : | UN 3103 |
| IATA | : | UN 3103 |

#### 14.2 UN proper shipping name

|      |   |  |
|------|---|--|
| ADN  | : | ORGANIC PEROXIDE TYPE C, LIQUID<br>(2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEXYNE -3) |
| ADR  | : | ORGANIC PEROXIDE TYPE C, LIQUID<br>(2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEXYNE -3) |
| RID  | : | ORGANIC PEROXIDE TYPE C, LIQUID<br>(2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEXYNE -3) |
| IMDG | : | ORGANIC PEROXIDE TYPE C, LIQUID<br>(2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEXYNE -3) |
| IATA | : | Organic peroxide type C, liquid<br>(2,5-Dimethyl-2,5-di-(tert-butylperoxy) hexyne-3) |

#### 14.3 Transport hazard class(es)

|      | Class | Subsidiary risks |
|------|-------|------------------|
| ADN  | : 5.2 |                  |
| ADR  | : 5.2 |                  |
| RID  | : 5.2 |                  |
| IMDG | : 5.2 |                  |
| IATA | : 5.2 | HEAT             |

#### 14.4 Packing group

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

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### 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

### ADN

Environmentally hazardous : yes

### ADR

Environmentally hazardous : yes

### RID

Environmentally hazardous : yes

### IMDG

Marine pollutant : yes

## 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 Maritime transport in bulk according to IMO instruments

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, mixtures and articles (Annex XVII)              | :   | Conditions of restriction for the following entries should be considered:<br>Number on list 3 |
| REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).   | :   | Not applicable  |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer   | :   | Not applicable  |
| Regulation (EU) 2019/1021 on persistent organic pollutants (recast)   | :   | Not applicable  |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals                          | :   | Not applicable  |
| REACH - List of substances subject to authorisation (Annex XIV)   | :   | 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                                   |
|   | E2  | ENVIRONMENTAL HAZARDS   |

Water hazard class (Germany) : WGK 2 obviously hazardous to water  
Classification according to AwSV, Annex 1 (5.2)

#### Other regulations:

Gefahrgruppe nach TRGS 741: Ib, S++ (German regulatory requirements)

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

#### 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 |
| AIIIC (AU) | : | On the inventory, or in compliance with the inventory |

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DSL (CA) : All components of this product are on the Canadian DSL

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

TECI (TH) : On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

This information is not available.

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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.  
These safety instructions also apply to empty packaging which may still contain product residues.  
The hazards on the label also apply to residues in the container.

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, <http://echa.europa.eu/>

### Classification of the mixture:

Org. Perox. C H242  
Aquatic Chronic 2 H411

### Classification procedure:

Based on product data or assessment  
Calculation method

### Full text of H-Statements

H241 : Heating may cause a fire or explosion.  
H411 : Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

Aquatic Chronic : Long-term (chronic) aquatic hazard  
Org. Perox. : Organic peroxides  
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.  
DE TRGS 900 / AGW : Time Weighted Average

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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; 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; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Disclaimer

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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