

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519



## TBPB-HA-M3

Version	Revision Date:	SDS Number:	Date of last issue: 2021/04/27
2.1	2024/06/25	600000000202	Date of first issue: 2017/10/30

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : TBPB-HA-M3

Chemical nature : Organic Peroxide  
Liquid mixture

#### Manufacturer or supplier's details

Company : United Initiators (Shanghai) Co., Ltd

Address : Room 501, Bldg. 1, No. 1 Shangda Road  
Shanghai, China, 200444

Telephone : +86 21 61172758

Emergency telephone number : +86 21 61172758

E-mail address : cs-initiators.cn@united-in.com

#### Recommended use of the chemical and restrictions on use

Recommended use : polymerisation initiators

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

<b>Appearance</b>	: liquid
<b>Colour</b>	: light yellow
<b>Odour</b>	: ester-like

Flammable liquid and vapour. Heating may cause a fire. May be harmful if swallowed or in contact with skin. Causes skin and eye irritation. May cause an allergic skin reaction. Toxic if inhaled. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

#### GHS Classification

Flammable liquids : Category 3

Organic peroxides : Type C

Acute toxicity (Oral) : Category 5

Acute toxicity (Inhalation) : Category 3

Acute toxicity (Dermal) : Category 5

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Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2B

Skin sensitisation : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 3

### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.  
H242 Heating may cause a fire.  
H303 + H313 May be harmful if swallowed or in contact with skin.  
H315 + H320 Causes skin and eye irritation.  
H317 May cause an allergic skin reaction.  
H331 Toxic if inhaled.  
H400 Very toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. 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.  
P234 Keep only in original container.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing mist or vapours.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.

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P280 Wear protective gloves/ eye protection/ face protection.

### Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER/ doctor if you feel unwell.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 + P364 Take off contaminated clothing and wash it before reuse.

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

P391 Collect spillage.

### Storage:

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

P405 Store locked up.

P410 Protect from sunlight.

P411 + P235 Store at temperatures not exceeding 30 °C/ 86 °F. Keep cool.

P420 Store away from other materials.

### Disposal:

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

### Physical and chemical hazards

Flammable liquid and vapour. Heating may cause a fire.

### Health hazards

May be harmful if swallowed. Toxic if inhaled. May be harmful in contact with skin. Causes skin irritation. Causes eye irritation. May cause an allergic skin reaction.

### Environmental hazards

Very toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### Other hazards which do not result in classification

None known.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

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### Components

Chemical name	CAS-No.	Concentration (% w/w)
tert-Butyl perbenzoate	614-45-9	>= 75 -< 80
Acetylacetone	123-54-6	>= 20 -< 25

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### 4. FIRST AID MEASURES

- General advice : Take off contaminated clothing and shoes immediately.  
Call a physician 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.  
Symptoms of poisoning may appear several hours later.  
No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus.
- If inhaled : Administer oxygen if breathing is difficult or cyanosis is observed.  
Call a physician immediately.  
If breathed in, move person into fresh air.  
If not breathing, give artificial respiration.  
Contact a poison control center.  
Call a physician or poison control centre immediately.  
If unconscious, place in recovery position and seek medical advice.  
Keep respiratory tract clear.
- In case of skin contact : If symptoms persist, call a physician.  
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
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 : Call a physician immediately.

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- Rinse mouth thoroughly with water.  
Keep respiratory tract clear.  
If symptoms persist, call a physician.
- Most important symptoms and effects, both acute and delayed : May be harmful if swallowed or in contact with skin.  
Causes skin and eye irritation.  
May cause an allergic skin reaction.  
Toxic if inhaled.  
sensitising effects
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
- Notes to physician : Treat symptomatically and supportively.
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### 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray jet  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- 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 vapours 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.
- Specific extinguishing methods : 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.
- Do not use a solid water stream as it may scatter and spread
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fire.  
Remove undamaged containers from fire area if it is safe to do so.  
Use water spray to cool unopened containers.

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

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### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : 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.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.

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.

Methods and materials for containment and 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.

Prevention of secondary hazards : Never return spills in original containers for re-use.  
Treat recovered material as described in the section "Disposal considerations".

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### 7. HANDLING AND STORAGE

#### Handling

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

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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.

Advice on safe handling : Open drum carefully as content may be under pressure.  
Protect from contamination.  
Do not swallow.  
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.  
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.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Avoidance of contact : Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

### Storage

Conditions for safe storage : Store in original container.  
Keep containers tightly closed in a cool, well-ventilated place.  
Store in cool place.  
Contamination may result in dangerous pressure increases - closed containers may rupture.  
Prevent unauthorized access.  
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.

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Materials to avoid : Keep away from combustible materials.  
Keep away from strong acids, bases, heavy metal salts and other reducing substances.

Recommended storage temperature : 10 - 30 °C

Further information on storage stability : Stable under recommended storage conditions.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Acetylacetone	123-54-6	TWA	25 ppm	ACGIH

**Engineering measures** : Minimize workplace exposure concentrations.

#### Personal protective equipment

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

Filter type : ABEK-filter

In the case of dust or aerosol formation use respirator with an approved filter.

ABEK-filter

Eye/face 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.  
Please follow all applicable local/national requirements when selecting protective measures for a specific workplace.  
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.  
Tightly fitting safety goggles  
Please wear suitable protective goggles. Also wear face pro-



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tection if there is a splash hazard.

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.

Hand protection

Material	: butyl-rubber
Break through time	: 120 min
Glove thickness	: 0.47 mm
Material	: Nitrile rubber
Break through time	: < 10 min
Glove thickness	: 0.40 mm

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.

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

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.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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Colour : light yellow

Odour : ester-like

Odour Threshold : not determined

pH : substance/mixture is non-soluble (in water)

Melting point/range : < 0 °C

Boiling point/boiling range : Decomposition: Decomposes below the boiling point.

Flash point : 48 °C  
Method: ISO 3679, closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Flammable liquid and vapour., Organic peroxide

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

Upper explosion limit / Upper flammability limit : 11.4 %(V)  
(for a component of this mixture)

Lower explosion limit / Lower flammability limit : 2.4 %(V)  
(for a component of this mixture)

Vapour pressure : 7.9 hPa (20 °C)  
(for a component of this mixture)

Relative vapour density : not determined

Relative density : not determined

Density : 1.03 g/cm<sup>3</sup> (20 °C)

Solubility(ies)  
Water solubility : insoluble

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature : not determined

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Self-Accelerating decomposition temperature (SADT) : 60 °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.

Viscosity  
Viscosity, dynamic : 4 mPa.s ( 20 °C)  
Viscosity, kinematic : not determined

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

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### 10. STABILITY AND REACTIVITY

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

Chemical stability : Stable under recommended storage conditions.  
No decomposition if stored normally.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.

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

Incompatible materials : Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

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

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### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

May be harmful if swallowed or in contact with skin.

Toxic if inhaled.

#### Product:

Acute oral toxicity : Acute toxicity estimate: 2,850 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 3,950 mg/kg  
Method: Calculation method

#### Components:

##### **tert-Butyl perbenzoate:**

Acute oral toxicity : LD0 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): 1.01 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 436

Acute dermal toxicity : LD0 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

##### **Acetylacetone:**

Acute oral toxicity : LD50 (Rat): 570 mg/kg

Acute inhalation toxicity : LC50 (Rat): 5.1 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit, female): 790 mg/kg

#### **Skin corrosion/irritation**

Causes skin irritation.

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### **Product:**

Remarks : May cause skin irritation in susceptible persons.

### **Components:**

#### **tert-Butyl perbenzoate:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation

#### **Acetylacetone:**

Species : Rabbit  
Result : No skin irritation

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

Causes eye irritation.

### **Product:**

Remarks : Vapours may cause irritation to the eyes, respiratory system and the skin.

### **Components:**

#### **tert-Butyl perbenzoate:**

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

#### **Acetylacetone:**

Species : Rabbit  
Result : No eye irritation

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

May cause an allergic skin reaction.

#### **Respiratory sensitisation**

Not classified due to lack of data.

### **Product:**

Remarks : Causes sensitisation.

### **Components:**

#### **tert-Butyl perbenzoate:**

Species : Mouse  
Method : OECD Test Guideline 429

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Result : May cause sensitisation by skin contact.

### Acetylacetone:

Exposure routes : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : Does not cause skin sensitisation.

### Germ cell mutagenicity

Not classified due to lack of data.

### Components:

#### tert-Butyl perbenzoate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: positive

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

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: positive

Test Type: Mouse Lymphoma  
Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse (male and female)  
Application Route: Oral  
Result: negative

### Acetylacetone:

Genotoxicity in vitro : Method: OECD Test Guideline 471  
Result: negative

Method: OECD Test Guideline 479  
Result: positive

Method: OECD Test Guideline 473  
Result: positive

Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Method: OECD Test Guideline 474  
Result: positive

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Method: OECD Test Guideline 483  
Result: negative

Method: OECD Test Guideline 475  
Result: negative

Method: OECD Test Guideline 478  
Result: Equivocal

Test Type: DNA Repair  
Species: Rat  
Application Route: Oral  
Result: negative

Species: Rat  
Application Route: inhalation (vapour)  
Method: OPPTS 870.5395  
Result: negative

### **Carcinogenicity**

Not classified due to lack of data.

### **Components:**

#### **tert-Butyl perbenzoate:**

Remarks : This information is not available.

### **Reproductive toxicity**

Not classified due to lack of data.

### **Components:**

#### **tert-Butyl perbenzoate:**

Effects on fertility : Species: Rat  
Application Route: Oral  
General Toxicity - Parent: NOAEL: 300 mg/kg body weight  
Method: OECD Test Guideline 421

Effects on foetal development : Species: Rat  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 300 mg/kg body weight  
Method: OECD Test Guideline 414

### **Acetylacetone:**

Effects on foetal development : Species: Rat  
Application Route: inhalation (vapour)  
Duration of Single Treatment: 13 d  
General Toxicity Maternal: NOAEC: 200  
Teratogenicity: NOAEC Parent: 400  
Embryo-foetal toxicity: NOAEC F1: 50

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Method: OECD Test Guideline 414

Species: Rat  
Application Route: inhalation (vapour)  
Duration of Single Treatment: 13 d  
General Toxicity Maternal: LOAEC: 400  
Embryo-foetal toxicity: LOAEC F1: 200  
Method: OECD Test Guideline 414

### STOT - single exposure

Not classified due to lack of data.

### STOT - repeated exposure

Not classified due to lack of data.

### Repeated dose toxicity

#### Components:

##### Acetylacetone:

Species	: Rat
NOAEL	: 200 mg/kg
LOAEL	: 805 mg/kg
Application Route	: inhalation (vapour)
Exposure time	: 9 d
Species	: Rat
NOAEL	: 100 mg/kg
Application Route	: inhalation (vapour)
Exposure time	: 90 d
Method	: OECD Test Guideline 413
Species	: Rabbit
NOAEL	: 244 mg/kg
LOAEL	: 975 mg/kg
Application Route	: Dermal
Exposure time	: 9 d

### Aspiration toxicity

Not classified due to lack of data.

#### Components:

##### Acetylacetone:

No aspiration toxicity classification

### Further information

#### Product:

Remarks : Solvents may degrease the skin.



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### Components:

#### **Acetylacetone:**

Remarks : Solvents may degrease the skin.

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### **tert-Butyl perbenzoate:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1.6 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 11 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0.8 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.72 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): 0.49 mg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50: 43 mg/l  
Exposure time: 0.5 h  
Method: OECD Test Guideline 209

#### **Acetylacetone:**

Toxicity to fish : LC50 (Fish): 104 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 25.9 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): 83.22

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plants	:	mg/l Exposure time: 72 h Method: OECD Test Guideline 201  NOEC (Pseudokirchneriella subcapitata (green algae)): 3.2 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 10 mg/l Exposure time: 34 d Method: OECD Test Guideline 210  LOEC (Pimephales promelas (fathead minnow)): 22 mg/l Exposure time: 34 d Method: OECD Test Guideline 210
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 18 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50: 107.6 mg/l Exposure time: 3 h Method: OECD Test Guideline 209  EC10: 13.2 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

### Persistence and degradability

#### Components:

##### **tert-Butyl perbenzoate:**

Biodegradability : Result: Readily biodegradable.  
Method: OECD Test Guideline 301D

##### **Acetylacetone:**

Biodegradability : Result: Readily biodegradable.  
Method: OECD Test Guideline 301C

### Bioaccumulative potential

#### Components:

##### **tert-Butyl perbenzoate:**

Partition coefficient: n-octanol/water : log Pow: 2.89 (25 °C)

##### **Acetylacetone:**

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Bioaccumulation : Bioconcentration factor (BCF): 3.16  
Remarks: Calculation

Partition coefficient: n-octanol/water : log Pow: 0.68 (40 °C)

### Mobility in soil

No data available

### Other adverse effects

#### Product:

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

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## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : 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.

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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## 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number : UN 3103  
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID  
(tert-BUTYL PEROXYBENZOATE)  
Class : 5.2  
Packing group : Not assigned by regulation  
Labels : 5.2  
Environmentally hazardous : yes

#### IATA-DGR

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UN/ID No. : UN 3103  
Proper shipping name : Organic peroxide type C, liquid  
(tert-Butyl peroxybenzoate)  
Class : 5.2  
Packing group : Not assigned by regulation  
Labels : Organic Peroxides, Keep Away From Heat  
Packing instruction (cargo aircraft) : 570  
Packing instruction (passenger aircraft) : 570

### IMDG-Code

UN number : UN 3103  
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID  
(tert-BUTYL PEROXYBENZOATE)  
Class : 5.2  
Packing group : Not assigned by regulation  
Labels : 5.2  
EmS Code : F-J, S-R  
Marine pollutant : yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### GB 6944/12268

UN number : UN 3103  
Proper shipping name : ORGANIC PEROXIDE TYPE C, LIQUID  
(tert-BUTYL PEROXYBENZOATE)  
Class : 5.2  
Packing group : Not assigned by regulation  
Labels : 5.2  
Marine pollutant : yes

### 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.

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## 15. REGULATORY INFORMATION

### National regulatory information

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

**Produkt unterliegt dem Sprengstoffgesetz (SprengG; Stoffgruppe C). (German regulatory requirement)**

**Law on the Prevention and Control of Occupational Diseases**

**Regulations on Safety Management of Hazardous Chemicals**

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Catalogue of Hazardous Chemicals : Listed

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

No. / Code	Chemical name / Category	Threshold quantity
W5.4	Flammable liquids	5,000 t
W7.2	Organic peroxides	50 t

### 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

AIRC (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

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

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## 16. OTHER INFORMATION

Revision Date : 2024/06/25

### 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 : Internal technical data, data from raw material SDSs, OECD

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compile the Safety Data Sheet : eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : yyyy/mm/dd

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA : 8-hour, time-weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

### 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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