

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version 1.1	Revision Date: 07.06.2017	SDS Number: 600000000045	Print Date: 23.01.2018
----------------	------------------------------	-----------------------------	---------------------------

---

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

#### 1.1 Product identifier

Trade name : TBHP-70-AQ

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

Use of the Sub-  
stance/Mixture : polymerisation initiators, Oxidizing agents

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

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

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

#### 1.4 Emergency telephone number

+49 / 89 / 74422 – 0 (24 h)

---

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Flammable liquids, Category 3	H226: Flammable liquid and vapour.
Organic peroxides, Type F	H242: Heating may cause a fire.
Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 2	H330: Fatal if inhaled.
Acute toxicity, Category 3	H311: Toxic in contact with skin.
Skin corrosion, Category 1C	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, Category 2	H341: Suspected of causing genetic defects.
Chronic aquatic toxicity, Category 2	H411: Toxic to aquatic life with long lasting effects.

#### 2.2 Label elements

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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

Hazard pictograms :



Signal word : Danger

Hazard statements :  
H226 Flammable liquid and vapour.  
H242 Heating may cause a fire.  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H341 Suspected of causing genetic defects.  
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.  
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.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P262 Do not get in eyes, on skin, or on clothing.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P315 Get immediate medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362 Take off contaminated clothing.  
P362 + P364 Take off contaminated clothing and wash it before reuse.

### Storage:

P403 + P235 **Store in a well-ventilated place. Keep cool.**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

### Disposal:

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

Hazardous components which must be listed on the label:

t-Butyl Hydroperoxide (CAS-No. 75-91-2)

### 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.

Vapours may form explosive mixture with air.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Organic Peroxide  
Liquid mixture

#### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
t-Butyl Hydroperoxide	75-91-2 200-915-7 01-2119446670-40	Flam. Liq. 3; H226 Org. Perox. C; H242 Acute Tox. 4; H302 Acute Tox. 2; H330 Acute Tox. 3; H311 Skin Corr. 1C; H314 Eye Dam. 1; H318 Skin Sens. 1; H317 Muta. 2; H341 Aquatic Chronic 2; H411	>= 65 - < 70

For explanation of abbreviations see section 16.

## 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.  
Symptoms of poisoning may appear several hours later.  
No artificial respiration, mouth-to-mouth or mouth to nose. Use suitable instruments/apparatus.  
Call a physician immediately.

Protection of first-aiders : First Aid responders should pay attention to self-protection

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

---

- and use the recommended protective clothing
- If inhaled : Call a physician or poison control centre immediately.  
If unconscious, place in recovery position and seek medical advice.  
Keep respiratory tract clear.  
Call a physician immediately.  
If breathed in, move person into fresh air.  
Contact a poison control center.
- In case of skin contact : 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.  
Call a physician immediately.  
Contact a poison control center.  
If on skin, rinse well with water.  
If on clothes, remove clothes.  
If symptoms persist, call a physician.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
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.  
Rinse mouth thoroughly with water.

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

- Risks : Harmful if swallowed.  
Toxic in contact with skin.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
Fatal if inhaled.  
Suspected of causing genetic defects.  
Causes severe burns.

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

- Treatment : Treat symptomatically and supportively.
- 

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam
-

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version 1.1	Revision Date: 07.06.2017	SDS Number: 600000000045	Print Date: 23.01.2018
----------------	------------------------------	-----------------------------	---------------------------

---

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 vapours which may auto-ignite.  
The product burns violently.  
Flash back possible over considerable distance.  
Vapours may form explosive mixtures with air.  
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.

---

## SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.  
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.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

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.

## 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 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.  
Protect from contamination.

Advice on protection against : Take necessary action to avoid static electricity discharge

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

fire and explosion (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 : 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 : 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.

Recommended storage temperature : 2 - 35 °C

Other data : No decomposition if stored normally.

### 7.3 Specific end use(s)

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

## 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:

Substance name	End Use	Exposure routes	Potential health effects	Value
t-Butyl Hydroperoxide	Workers	Inhalation	Long-term systemic effects	3.1 mg/m <sup>3</sup>
	Workers	Inhalation	Acute systemic effects	10.4 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term local effects	0.83 mg/m <sup>3</sup>
	Workers	Inhalation	Acute local effects	21.3 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	12.5 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
t-Butyl Hydroperoxide	Fresh water	0.0015 mg/l

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

	Marine water	0.00015 mg/l
	Intermittent use/release	0.015 mg/l
	Sewage treatment plant	0.17 mg/l
	Fresh water sediment	0.00621 mg/l
	Soil	0.00036 mg/kg

### 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 : butyl-rubber  
Break through time :  $\geq$  480 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 approved filter.

Filter type : ABEK-filter

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance : liquid  
Colour : colourless  
Odour : characteristic  
Odour Threshold : No data available  
pH : No data available  
Melting point/range :  $< 0$  °C



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

---

Boiling point/boiling range	:	Decomposition: Decomposes below the boiling point.
Flash point	:	38 °C Method: ISO 3679
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	50.78 hPa (25 °C)
Density	:	0.93 g/cm <sup>3</sup> (20 °C)
Solubility(ies) Water solubility	:	> 691 g/l (20 °C) soluble
Partition coefficient: n-octanol/water	:	log Pow: 0.85 (20 °C)
Viscosity Viscosity, dynamic	:	4.1 mPa.s (20 °C)
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.
--	---	--

Refractive index : 1.387 at 20 °C

Self-ignition :

---

## 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

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

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

---

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Harmful if swallowed.  
Toxic in contact with skin.  
Fatal if inhaled.

#### Product:

Acute oral toxicity : LD50 (Rat): 560 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 1.85 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 440 mg/kg  
Method: OECD Test Guideline 402

#### Components:

##### **t-Butyl Hydroperoxide:**

Acute oral toxicity : LD50 (Rat): 560 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 1.85 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 440 mg/kg  
Method: OECD Test Guideline 402

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

---

### **Skin corrosion/irritation**

Causes severe burns.

#### **Product:**

Species: Rabbit

Method: Draize Test

Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.

Remarks: Extremely corrosive and destructive to tissue.

#### **Components:**

##### **t-Butyl Hydroperoxide:**

Species: Rabbit

Method: Draize Test

Result: Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.

Remarks: Extremely corrosive and destructive to tissue.

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

Causes serious eye damage.

#### **Product:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irreversible effects on the eye

Remarks: May cause irreversible eye damage.

#### **Components:**

##### **t-Butyl Hydroperoxide:**

Species: Rabbit

Method: OECD Test Guideline 405

Result: Irreversible effects on the eye

Remarks: May cause irreversible eye damage.

### **Respiratory or skin sensitisation**

#### **Skin sensitisation**

May cause an allergic skin reaction.

#### **Respiratory sensitisation**

Not classified based on available information.

#### **Product:**

Species: Guinea pig

Method: OECD Test Guideline 406



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

Germ cell mutagenicity- Assessment : Positive results from in vitro mammalian mutagenicity assays, chemical structure activity relationship to known germ cell mutagens

### **Carcinogenicity**

Not classified based on available information.

#### **Product:**

Species: Mouse  
Application Route: Oral  
Exposure time: 103 w  
Result: negative

#### **Components:**

##### **t-Butyl Hydroperoxide:**

Species: Mouse  
Application Route: Oral  
Exposure time: 103 w  
Result: negative

### **Reproductive toxicity**

Not classified based on available information.

#### **Product:**

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Oral  
General Toxicity - Parent: NOAEL: 21 mg/kg body weight  
Method: OECD Test Guideline 422

#### **Components:**

##### **t-Butyl Hydroperoxide:**

Effects on fertility : Species: Rat  
Application Route: Oral  
General Toxicity - Parent: NOAEL: 21 mg/kg body weight  
Method: OECD Test Guideline 422

Effects on foetal development : Species: Rat  
Application Route: Oral  
General Toxicity Maternal: NOAEL: 35 mg/kg body weight  
Developmental Toxicity: NOAEL: 35 mg/kg body weight  
Method: OECD Test Guideline 414

### **STOT - single exposure**

Not classified based on available information.

#### **Product:**

Remarks: No data available

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

---

### STOT - repeated exposure

Not classified based on available information.

### Repeated dose toxicity

#### Product:

Species: Rat  
NOAEL: 21 mg/kg  
Application Route: Oral  
Exposure time: 28 d  
Method: OECD Test Guideline 422

Species: Rat  
LOAEL: 0.022 mg/l  
Application Route: Inhalation  
Exposure time: 28 d  
Method: OECD Test Guideline 412

### Aspiration toxicity

Not classified based on available information.

#### Product:

No data available

### Further information

#### Product:

Remarks: Solvents may degrease the skin.

---

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 29.61 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 14.07 mg/l  
aquatic invertebrates : Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 1.47 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Bacteria): 17 mg/l

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

### Components:

#### **t-Butyl Hydroperoxide:**

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 29.61 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 14.07 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 1.47 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC50 (Bacteria): 17 mg/l

### 12.2 Persistence and degradability

#### Product:

- Biodegradability : Result: Not readily biodegradable.

#### Components:

#### **t-Butyl Hydroperoxide:**

- Biodegradability : Result: Not readily biodegradable.

### 12.3 Bioaccumulative potential

#### Components:

#### **t-Butyl Hydroperoxide:**

- Partition coefficient: n-octanol/water : log Pow: 0.85 (20 °C)

### 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.**

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

**Toxic to aquatic life with long lasting effects.**

### Components:

#### **t-Butyl Hydroperoxide:**

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.**

---

## 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.

---

## SECTION 14: Transport information

### 14.1 UN number

- ADR : UN 3109  
RID : UN 3109  
IMDG : UN 3109  
IATA : UN 3109

### 14.2 UN proper shipping name

- ADR : ORGANIC PEROXIDE TYPE F, LIQUID  
(tert-BUTYL HYDROPEROXIDE)  
RID : ORGANIC PEROXIDE TYPE F, LIQUID  
(tert-BUTYL HYDROPEROXIDE)  
IMDG : ORGANIC PEROXIDE TYPE F, LIQUID  
(tert-BUTYL HYDROPEROXIDE)  
IATA : Organic peroxide type F, liquid  
(tert-Butyl hydroperoxide)

### 14.3 Transport hazard class(es)

- ADR : 5.2  
RID : 5.2



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

**IMDG** : 5.2

**IATA** : 5.2

### 14.4 Packing group

#### ADR

Packing group : Not assigned by regulation  
Classification Code : P1  
Hazard Identification Number : 539  
Labels : 5.2 (8)  
Tunnel restriction code : (D)

#### RID

Packing group : Not assigned by regulation  
Classification Code : P1  
Hazard Identification Number : 539  
Labels : 5.2 (8)

#### IMDG

Packing group : Not assigned by regulation  
Labels : 5.2 (8)  
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, Corrosive

#### IATA (Passenger)

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

### 14.5 Environmental hazards

#### ADR

Environmentally hazardous : yes

#### RID

Environmentally hazardous : yes

#### IMDG

Marine pollutant : yes

### 14.6 Special precautions for user

Not applicable

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

Not applicable for product as supplied.

---

## SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High : Not applicable

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

Concern for Authorisation (Article 59).

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

Other regulations : Gefahrengruppe nach § 3 BGV B4: II (German regulatory requirements)

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

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:

AICS (AU) : On the inventory, or in compliance with the inventory

NZIoC (NZ) : On the inventory, or in compliance with the inventory

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

TCSI (TW) : On the inventory, or in compliance with the inventory

TSCA (US) : On TSCA Inventory

### 15.2 Chemical safety assessment

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

## SECTION 16: Other information

### Full text of H-Statements

- H226 : Flammable liquid and vapour.
- H242 : Heating may cause a fire.
- H302 : Harmful if swallowed.
- H311 : Toxic in contact with skin.
- H314 : Causes severe skin burns and eye damage.
- H317 : May cause an allergic skin reaction.
- H318 : Causes serious eye damage.
- H330 : Fatal if inhaled.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

H341 : Suspected of causing genetic defects.  
H411 : Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Aquatic Chronic : Chronic aquatic toxicity  
Eye Dam. : Serious eye damage  
Flam. Liq. : Flammable liquids  
Muta. : Germ cell mutagenicity  
Org. Perox. : Organic peroxides  
Skin Corr. : Skin corrosion  
Skin Sens. : Skin sensitisation

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; 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

### Further information

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.

IE / EN

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## TBHP-70-AQ

Version  
1.1

Revision Date:  
07.06.2017

SDS Number:  
600000000045

Print Date:  
23.01.2018

---