

**SAFETY DATA SHEET**  
**AKPEROX TBHP 70**

COMMISSION REGULATION (EU) 2015/830 of 28 May 2015.

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier****Product name** AKPEROX TBHP 70**1.2. Relevant identified uses of the substance or mixture and uses advised against****Identified uses** Industrial use.  
**Uses advised against** No specific uses advised against are identified.**1.3. Details of the supplier of the safety data sheet****Supplier** AKPA KİMYA AMBALAJ SANAYİ VE TİCARET ANONİM ŞİRKETİ  
Yenibosna Merkez Mah. Ladin Sok.  
No:36/70 Kat:12 34197 Townofis Bahçelievler, İstanbul, TÜRKİYE  
Web: www.akpakimya.com  
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E-mail: info@akpakimya.com  
**Contact person** Export Department - export@akpakimya.com**1.4. Emergency telephone number****Emergency telephone** AKPA Kimya : +90 549 558 4040**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification (EC 1272/2008)****Physical hazards** Flam. Liq. 3 - H226; Org. Perox. F - H242  
**Health hazards** Acute Tox. 4 - H302; Acute Tox. 3 - H311; Acute Tox. 2 - H330; Skin Corr. 1B - H314;  
Eye Dam. 1 - H318; Skin Sens. 1 - H317; Muta. 2 - H341; STOT SE 3 - H335  
**Environmental hazards** Aquatic Chronic 2 - H411**2.2. Label elements****Pictogram**



ORGANIC PEROXIDES, INITIATORS  
PAINT DRIERS

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<b>Signal Word</b>	Danger	
<b>Hazard statements</b>	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
	H335	May cause respiratory irritation.
	H341	Suspected of causing genetic defects.
	H411	Toxic to aquatic life with long lasting effects.
<b>Precautionary statements</b>	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P220	Keep away from combustible materials.
	P261	Avoid breathing vapour/ spray.
	P270	Do not eat, drink or smoke when using this product.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	P284	[In case of inadequate ventilation] wear respiratory protection.
	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.
	P310	Immediately call a POISON CENTER/ doctor.
	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
	P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing. P410 Protect from sunlight.
	P410	Protect from sunlight.
	P411+P235	Store at temperatures not exceeding (0) – (30)°C. Keep cool.
	P501	Dispose of contents/ container in accordance with national regulations.

**Contains** tert-butyl hydroperoxide

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures



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<b>tert-butyl hydroperoxide</b>		<b>69-71 %</b>	
REACH Registration Number: 01-2119446670-40-0004			
<b>CAS Number</b>	<b>75-91-2</b>	<b>EC Number</b>	<b>200-915-7</b>
<b>Classification</b>			
Flam. Liq. 3	H226		
Org. Perox. E	H242		
Acute Tox. 4	H302		
Acute Tox. 3	H311		
Skin Corr. 1B	H314		
Skin Sens. 1	H317		
Eye Dam. 1	H318		
Acute Tox. 2	H330		
Muta. 2	H341		
STOT SE3	H335		
Aquatic Chronic 2	H411		

<b>water</b>		<b>&lt;30 %</b>	
<b>CAS Number</b>	<b>7732-18-5</b>	<b>EC Number</b>	<b>231-791-2</b>
<b>Classification</b>			
Not classified.			

<b>di-tert-butyl peroxide</b>		<b>&lt;6 %</b>	
REACH Registration Number: 01-2119513335-48-0006			
<b>CAS Number</b>	<b>110-05-4</b>	<b>EC Number</b>	<b>203-733-6</b>
<b>Classification</b>			
Flam. Liq. 2	H225		
Org. Perox. E	H242		
Muta. 2	H341		

<b>Propane-1,2-diol</b>		<b>&lt;6 %</b>	
REACH Registration Number: 01-2119456809-23-0003			
<b>CAS Number</b>	<b>57-55-6</b>	<b>EC Number</b>	<b>200-338-0</b>
<b>Classification</b>			
Not classified.			

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition Comments

The data shown are in accordance with the latest EC Directives.

#### SECTION 4: First aid measures

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#### 4.1. Description of first aid measures

<b>General information</b>	Get medical attention immediately. Show this Safety Data Sheet to the medical personnel. Chemical burns must be treated by a physician.
<b>Inhalation</b>	Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. Get medical attention immediately.
<b>Skin contact</b>	It is important to remove the substance from the skin immediately. Take off immediately all contaminated clothing. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention. Chemical burns must be treated by a physician.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes. Get medical attention if symptoms are severe or persist after washing.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue. If it is suspected that volatile contaminants are still present around the affected person, first aid personnel should wear an appropriate respirator or self-contained breathing apparatus. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves. It may be dangerous for first aid personnel to carry out mouth-to-mouth resuscitation.

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

<b>General information</b>	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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<b>Inhalation</b>	A single exposure may cause the following adverse effects: Difficulty in breathing. Unconsciousness, possibly death.
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
<b>Eye contact</b>	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

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

<b>Notes for the doctor</b>	Treat symptomatically. Keep affected person under observation. May cause sensitisation or allergic reactions in sensitive individuals.
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#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	The product is flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
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<b>Unsuitable extinguishing Media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
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##### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	May cause or intensify fire; oxidiser. Containers can burst violently or explode when heated, due to excessive pressure build-up. Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard. This product is toxic. Severe corrosive hazard. Water used for fire extinguishing, which has been in contact with the product, may be corrosive.
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##### Hazardous decomposition products

Thermal decomposition or combustion products may include the following substances: Very toxic or corrosive gases or vapours.

##### 5.3. Advice for firefighters

##### Protective actions during firefighting

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Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. May cause or intensify fire; oxidiser. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

**Special protective equipment for firefighters** Regular protection may not be safe. Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

#### SECTION 6: Accidental release measures

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

**Personal precautions** No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of dust and vapours. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes. Avoid contact with contaminated tools and objects.

##### 6.2. Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

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

**Methods for cleaning up** Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Use only non-sparking tools. Do not allow material to enter confined spaces, due to the risk of

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explosion. This product is corrosive. Provide adequate ventilation. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material.

Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

#### 6.4. Reference to other sections

**Reference to the other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Usage precautions** Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. The product is flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. In use may form flammable/explosive vapour-air mixture. Vapours may accumulate on the floor and in low-lying areas. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharges. This product is toxic. This product is corrosive. Immediate first aid is imperative. Suspected of causing genetic defects. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

**Advice on general occupational hygiene** Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

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

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**Storage precautions** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store away from other materials. Eliminate all sources of ignition. Take precautionary measures against static discharges. Earth container and transfer equipment to eliminate sparks from static electricity. Keep away from oxidising materials, heat and flames. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Protect from sunlight. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent. Store at temperatures between 0°C and 30°C.

**Storage class (TRGS 510)** 5.2, organic peroxides and self-reactive hazardous substances

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

No exposure limits noted for ingredient(s).

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

Substance name	End Use	Exposure routes	Potential health effects	Value
tert-butyl hydroperoxide	Workers	Inhalation	Long-term systemic effects	3.1 mg/m <sup>3</sup>
	Workers	Inhalation	Acute systemic effects	10.4 mg/kg
	Workers	Inhalation	Long-term local effect	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
tert-butyl hydroperoxide	Fresh water	0.0015 mg/l
	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/l

### 8.2. Exposure controls



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#### Protective equipment



#### Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilating equipment.

#### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Wear tight-fitting, chemical splash goggles or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

#### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

#### Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

#### Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive

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industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

#### Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

#### Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### SECTION 9: Physical and Chemical Properties

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

<b>Appearance</b>	Liquid.
<b>Colour</b>	Clear.
<b>Odour</b>	Mild.
<b>pH</b>	Slightly acidic.
<b>Melting point</b>	Not applicable.
<b>Initial boiling point and range</b>	Not applicable.
<b>Flash point</b>	27°C
<b>Vapour pressure</b>	23.2 kPa @ 20°C
<b>Vapour density</b>	2.07 (Air = 1.0)
<b>Solubility(ies)</b>	Soluble in water. Soluble in the following materials: diethyl ether
<b>Viscosity</b>	4.15 mPa s @ 20°C
<b>Density</b>	0.94 ±0,005 gr/cm <sup>3</sup> @ 20°C

#### 9.2. Other information

<b>Refractive index</b>	1.387 (@ 20°C)
<b>Molecular weight</b>	90,1 g/mole
<b>Active Oxygen Content</b>	12.1% - 12.6%
<b>DTBP (Dialkyl Peroxides)</b>	Max. 6,0 %
<b>Other Hydroperoxide</b>	Max. 1,0 %
<b>Propanediol</b>	Max. 6,0 %



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#### SECTION 10: Stability and reactivity

##### 10.1. Reactivity

**Reactivity** No information available.

##### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions. Will decompose at temperatures exceeding 80°C.

##### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** The following materials may react strongly with the product: Oxidising agents.

##### 10.4. Conditions to avoid

**Conditions to avoid** Avoid heat, flames and other sources of ignition. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented. Do not pressurise, cut, weld, drill, grind or otherwise expose containers to heat or sources of ignition.

##### 10.5. Incompatible materials

**Materials to avoid** Reducing agents. Flammable/combustible materials. Hydrocarbons. Organic cyanides (nitriles). Esters. Some metals. Oxidising materials. Acids - oxidising. Organic peroxides/hydroperoxides. Acids. Alkalis.

##### 10.6. Hazardous decomposition products

**Hazardous decomposition Products** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrocarbons.

#### SECTION 11: Toxicological information

##### 11.1. Information on toxicological effects

###### Toxicological information

###### Product

Acute oral toxicity	LD50: 560 mg/kg	Species: Rat
Acute dermal toxicity	LD50: 440 mg/kg	Species: Rabbit
Acute inhalation toxicity	LC50 (Rat): 1.85 mg/l	Exposure time: 4h

###### tert-butyl hydroperoxide

Acute oral toxicity	LD50: 560 mg/kg	Species: Rat
Acute dermal toxicity	LD50: 440 mg/kg	Species: Rabbit



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Acute inhalation toxicity      LC50 (Rat): 1.85 mg/l      Exposure time: 4h

#### **Propane-1,2-diol**

Acute oral toxicity      LD50: 2.000 mg/kg      Species: Rat  
Acute dermal toxicity      LD50: 20.800 mg/kg      Species: Rabbit

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

Skin Corr. 1C - H314 Causes severe burns.

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

Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

#### **Respiratory or skin sensitisation:**

##### **Respiratory sensitisation**

Based on available data the classification criteria are not met.

##### **Skin sensitisation**

May cause skin sensitisation or allergic reactions in sensitive individuals.

#### **Germ cell mutagenicity:**

Genotoxicity - In Vitro - In Vivo  
Suspected of causing genetic defects.

#### **Carcinogenicity:**

Based on available data the classification criteria are not met.

#### **IARC carcinogenicity**

None of the ingredients are listed or exempt.

#### **Reproductive Toxicity:**

Based on available data the classification criteria are not met.

#### **Reproductive Toxicity – Development**

Based on available data the classification criteria are not met.

#### **Specific target organ toxicity - single exposure:**

STOT - Single exposure  
STOT SE 3 - H335 May cause respiratory irritation.

#### **Specific target organ toxicity - repeated exposure:**

STOT - Repeated exposure  
Based on available data the classification criteria are not met.



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### Aspiration Hazard

Based on available data the classification criteria are not met.

<b>Inhalation</b>	A single exposure may cause the following adverse effects: Difficulty in breathing. Unconsciousness, possibly death
<b>Ingestion</b>	May cause sensitisation or allergic reactions in sensitive individuals. May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.
<b>Skin contact</b>	May cause skin sensitisation or allergic reactions in sensitive individuals. Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.
<b>Eye contact</b>	Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.
<b>Route of entry</b>	Ingestion Inhalation Skin and/or eye contact
<b>Target organs</b>	Respiratory system, lungs
<b>Medical considerations</b>	Skin disorders and allergies.

### SECTION 12: Ecological Information

#### 12.1. Toxicity

**Toxicity** Aquatic Chronic 2 - H411 Toxic to aquatic life with long lasting effects.

##### Product

**Toxicity to fish** LC<sub>50</sub>, 96h (Pimephales promelas (fathead minnow)): 29.61 mg/l

**Toxicity to daphnia and other aquatic invertebrates** EC<sub>50</sub>, 48h (Daphnia magna (Water flea)): 14.07 mg/l

**Toxicity to algae** EC<sub>50</sub>, 72h (Pseudokirchneriella subcapitata (green algae)): 1.47 mg/l

**Toxicity to microorganisms** EC<sub>50</sub>, 0.5h (Bacteria): 17 mg/l

##### tert-butyl hydroperoxide

**Toxicity to fish** LC<sub>50</sub>, 96h (Pimephales promelas (fathead minnow)): 29.61 mg/l

**Toxicity to daphnia and other aquatic invertebrates** EC<sub>50</sub>, 48h (Daphnia magna (Water flea)): 14.07 mg/l

**Toxicity to algae** EC<sub>50</sub>, 72h (Pseudokirchneriella subcapitata (green algae)): 1.47 mg/l

**Toxicity to microorganisms** EC<sub>50</sub>, 0.5h (Bacteria): 17 mg/l

##### di-tert-butyl peroxide

**Toxicity to fish** LC 50, 96h: >1000 mg/l



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#### Propane-1,2-diol

<b>Toxicity to fish</b>	LC <sub>50</sub> , 96h (oncolhynchus mykiss): 710 mg/l
<b>Toxicity to daphnia and other aquatic invertebrates</b>	EC <sub>50</sub> , 48h (Daphnia magna): >1000 mg/l
<b>Toxicity to algae</b>	EC <sub>50</sub> , 72h (selenastrum capricornutum): >1000 mg/l

#### 12.2. Persistence and degradability

**Persistence and degradability** The degradability of the product is not known.

#### 12.3. Bio accumulative potential

**Bio accumulative potential** No data available on bioaccumulation.

#### 12.4. Mobility in soil

**Mobility** The product is water-soluble and may spread in water systems.

#### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

#### 12.6. Other adverse effects

**Other adverse effects** None known.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

**General Information** The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

#### Disposal methods

Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Vapour from residual product may create a highly flammable or explosive atmosphere inside the container. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Do not cut or weld used containers unless they have been thoroughly cleaned internally.



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#### SECTION 14: Transport information

**General Information** For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

##### 14.1. UN number

UN No. (ADR/RID)	3109
UN No. (IMDG)	3109
UN No. (ICAO)	3109
UN No. (ADN)	3109

##### 14.2. UN proper shipping name

**Proper Shipping name (ADR/RID)** ORGANIC PEROXIDE TYPE F, LIQUID (tert-BUTYL HYDROPEROXIDE)

**Proper Shipping name (IMDG)** ORGANIC PEROXIDE TYPE F, LIQUID (tert-BUTYL HYDROPEROXIDE)

**Proper Shipping name (ICAO)** ORGANIC PEROXIDE TYPE F, LIQUID (tert-BUTYL HYDROPEROXIDE)

**Proper Shipping name (ADN)** ORGANIC PEROXIDE TYPE F, LIQUID (tert-BUTYL HYDROPEROXIDE)

##### 14.3. Transport hazard class(es)

ADR/RID class	5.2
ADR/RID subsidiary risk	8
ADR/RID label	5.2
IMDG class	5.2
IMDG subsidiary risk	8
ICAO class/division	5.2
ICAO subsidiary risk	8
ADN class	5.2
ADN subsidiary risk	8

**Transport labels**

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#### 14.4. Packing group

Not applicable.

#### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



#### 14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EMS	F-J, S-R
ADR transport category	2
Emergency Action Code	2W
Hazard Identification Number (ADR/RID)	539
Tunnel Restriction Code	(D)

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

Transport in bulk according to Annex II of MARPOL No data available.

### SECTION 15: Regulatory information

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

National regulations	Health and Safety at Work etc. Act 1974 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
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<b>EU legislation</b>	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
<b>Water hazard class</b>	WGK 3 highly hazardous to water.
<b>Storage / danger group</b>	Risk group OP II

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### SECTION 16: Other information

<b>Key literature references and sources for data</b>	This SDS is prepared based on the information received from the product owner.
<b>Classification procedures according to Regulation (EC) 1272/2008</b>	Acute Tox. 2 - H330: Acute Tox. 3 - H311: Acute Tox. 4 - H302: Eye Dam. 1 - H318: Skin Corr. 1C - H314: STOT SE 3 - H335: Skin Sens. 1 - H317: Muta. 2 - H341: Calculation method. Aquatic Chronic 2 - H411: : Calculation method. Flam. Liq. 3 - H226: Org. Perox. F - H242: : Expert judgement
<b>Training advice</b>	Read and follow manufacturer's recommendations. Only trained personnel should use this material.
<b>Revision comments</b>	The SDS is generated in accordance with the 1907/2006 REACH and 1272/2008 CLP regulations.
<b>Issued by</b>	Simge ARIK lab@akpakimya.com +90 282 361 80 99
<b>Issue Date</b>	25.11.2009
<b>Revision date</b>	03.05.2021
<b>Revision</b>	5.0
<b>Hazard statements in full</b>	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.



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H317 May cause an allergic skin reaction.

H318 Causes serious eye damage. H330 Fatal if inhaled.

H330 Fatal if inhaled.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

H411 Toxic to aquatic life with long lasting effects.

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.