

SAFETY DATA SHEET**EFOX 10**

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 EFOX 10
Chemical name Tert-Butyl Peroxy 2- Ethylhexanoate - TBPEH

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

Identified uses Reaction initiator
Industrial use
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Manufacturer 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
TEL: +90 212 580 55 59
FAX: +90 212 580 55 21
E-mail: info@akpakimya.com
Contact person Export Department - export@akpakimya.com

1.4. Emergency telephone number

Emergency telephone CHEMTREC: TOLL Free 1-800-424-9300 / Local: +1-703-527-3887
For product information AKPA KİMYA: +90 549 558 40 40

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Classification (EC 1272/2008)
Physical hazards Org. Perox. C - H242
Health hazards Skin Sens. 1 - H317; Repr. 1B - H360F
Environmental hazards Aquatic Acute 1 - H400; Aquatic Chronic 2 - H411

2.2. Label elements**Pictogram****Signal Word****Hazard statements****Danger**

H242 Heating may cause a fire.
H317 May cause an allergic skin reaction.

SAFETY DATA SHEET

EFOX 10

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

- H360F** May damage fertility.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects

Precautionary statements

- P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from acids, alkalis, heavy metal compounds, oxidizing material, combustible materials.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P411+P235 Store at temperatures not exceeding (-30°C) - (+10°C). Keep cool.
P501 Dispose of contents/ container in accordance with national regulations.

Commission Regulation (EU) No 2015/830 of 28 May 2015.

Contains

tert-butyl 2-ethylperoxyhexanoate

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

tert-butyl 2-ethylperoxyhexanoate		%98<	
CAS Number	3006-82-4	EC Number	221-110-7
Classification			
Org. Perox. C	H242		
Skin Sen. 1	H317		
Repr. 1B	H360F	M=1	
Aquatic Acute 1	H400		
Aquatic Chronic 2	H411		

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove affected person from source of contamination. Get medical attention if any discomfort continues.

SAFETY DATA SHEET**EFOX 10**

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

Inhalation	Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions. NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.
Ingestion	Immediately rinse mouth and drink plenty of water. DO NOT induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention immediately!
Skin contact	Remove victim immediately from source of exposure. Immediately remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention promptly if symptoms occur after washing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue. 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**General information**

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.

Inhalation	May cause respiratory irritation.
Ingestion	May cause discomfort if swallowed.
Skin contact	May cause an allergic skin reaction.
Eye contact	May cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed**Notes for the doctor**

Treat symptomatically. May cause sensitization or allergic reactions in sensitive individuals.

SAFETY DATA SHEET**EFOX 10**

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

5.1. Extinguishing media**Suitable extinguishing media** Extinguish with alcohol-resistant foam, carbon dioxide, dry powder.**Unsuitable extinguishing Media** Halon. Direct water jet.**5.2. Special hazards arising from the substance or mixture****Specific hazards**

In case of fire, toxic gases may be formed. Vapours may form explosive air mixtures even at room temperature. Containers can burst violently when heated, due to excess pressure build-up.

Hazardous decomposition products

Fire causes formation of toxic gases. Forms explosive mixtures with air. May explode when heated or when exposed to flames or sparks.

5.3. Advice for firefighters**Protective actions during firefighting**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Face mask, protective gloves and safety helmet.

Special protective equipment for firefighters

Use pressurised air mask if product is involved in a fire. Cool containers exposed to flames with water until well after the fire is out. If possible, fight fire from protected position. Move container from fire area if it can be done without risk. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. If risk of water pollution occurs, notify appropriate authorities.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****Personal precautions**

Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.

6.2. Environmental precautions**Environmental precautions**

Do not discharge into drains, water courses or onto the ground. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

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

Keep combustibles away from spilled material. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Dike far ahead of larger spills for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage.

SAFETY DATA SHEET**EFOX 10**

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

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**

Keep away from heat, sparks and open flame. Avoid inhalation of vapours/spray and contact with skin and eyes. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. Do not handle broken packages without protective equipment.

Advice on general occupational hygiene

Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site. Do not eat, drink or smoke when using the product. Observe good chemical hygiene practices. Mechanical ventilation or local exhaust ventilation may be required. Container must be kept tightly closed. Protect against direct sunlight.

7.2. Conditions for safe storage, including any incompatibilities**Storage precautions**

Keep away from oxidisers, heat and flames. Store in tightly closed original container in a dry, cool and well-ventilated place. Avoid contact with oxidising agents. Store away from: Acids. Alkalis. Heavy metal compounds. Oxidising material - Keep away from flammable and combustible materials. Store in closed original container at temperatures +10°C. Provide an adequate ventilation system.

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:

SAFETY DATA SHEET

EFOX 10

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

Substance name	End Use	Exposure routes	Potential health effects	Value
tert-Butyl 2-ethylperoxyhexanoate	Workers	Inhalation	Long-term systemic effects	3,17 mg/m ³
	Workers	Skin contact	Long-term systemic effects	1,8 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
tert-Butyl 2-ethylperoxyhexanoate	Fresh water	0,0019 mg/l
	Marine water	0,00019 mg/l
	Intermittent water	0,0044 mg/l
	Fresh water sediment	0,622 mg/kg
	Marine sediment	0,0622 mg/kg
	Sewage treatment plant	0,64 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. All handling to take place in well-ventilated area.

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.

SAFETY DATA SHEET**EFOX 10**

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

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	DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Isolate contaminated clothing and wash before reuse. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. Wash promptly with soap & water if skin becomes contaminated.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Wear suitable mask. 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 EN14 387 and EN143. 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	Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

Appearance	Clear liquid.
Colour	Colorless.
Odour	Characteristic.
Melting point	Not available.
Flash point	71°C
Bulk density	Not available.
Density	0,9 ± 0,005 gr/cm ³ @20°C
Solubility(ies)	Partially soluble in water.
Viscosity	4,3 mPa.s (20°C)

9.2. Other information

Active Oxygen Content	Min. 7,18 %
SADT	35°C

SAFETY DATA SHEET

EFOX 10

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

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

Stable under recommended storage conditions

10.2. Chemical stability

Stability

Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions

Vapors 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

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

Toxicological information

tert-Butyl 2-ethylperoxyhexanoateAcute oral toxicity LD50: $\geq 10,000$ mg/kg

Species: Rat

Acute dermal toxicity LD50: 16,818 mg/kg

Species: Rabbit

Acute inhalation toxicity LC50 (Rat): >42.2 mg/l

Exposure time: 6h

Serious eye damage/irritation:

Based on available data the classification criteria are not met.

Skin corrosion/irritation:

Based on available data the classification criteria are not met.

Respiratory or skin sensitisation:**Respiratory sensitisation**

Based on available data the classification criteria are not met.

Skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity:

Based on available data the classification criteria are not met.

Carcinogenicity:

Based on available data the classification criteria are not met.

SAFETY DATA SHEET**EFOX 10**

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

Reproductive Toxicity - Fertility	May damage fertility.
Reproductive Toxicity – Development	Based on available data the classification criteria are not met.
Specific target organ toxicity - single exposure:	
STOT - Single exposure	Based on available data the classification criteria are not met.
Specific target organ toxicity - repeated exposure:	
STOT - Repeated exposure	Based on available data the classification criteria are not met.
Aspiration Hazard	Based on available data the classification criteria are not met.
Inhalation	May cause irritation.
Ingestion	May cause discomfort if swallowed.
Skin contact	May cause skin irritation. May cause an allergic skin reaction.
Eye contact	May cause irritation.

SECTION 12: Ecological Information

12.1. Toxicity	Very toxic to aquatic life with long lasting effects.
<u>Ecological information on ingredients.</u>	
<u>tert-butyl perbenzoate</u>	
Toxicity to fish	LC50, 96h (Oncorhynchus mykiss (rainbow trout)): 8.66 mg/l NOEC, 96h (Poecilia reticulata (guppy)): 2.10 mg/l
Toxicity to algae	EC50, 72h (Pseudokirchneriella subcapitata (green algae)): 0.44 mg/l NOEC, 72h (Pseudokirchneriella subcapitata (green algae)): 0.018
Toxicity to microorganisms	EC50, 0.5h: 64 mg/l
Toxicity to daphnia and other aquatic invertebrates	EC50, 48h (Daphnia magna (Water flea)): 7.5 mg/l
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC: 0.45 mg/l, 21d (Daphnia magna (Water flea)) LOEC: 0.87 mg/l, 21d (Daphnia magna (Water flea))
12.2. Persistence and degradability	
Persistence and degradability	The product is readily biodegradable.
12.3. Bio accumulative potential	

SAFETY DATA SHEET**EFOX 10**

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

Bio accumulative potential tert-Butyl 2-ethylperoxyhexanoate:
Partition coefficient: noctanol/water: log Pow: 4.79 (20 °C / 20 °C)

12.4. Mobility in soil
Mobility No data available.

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 Not known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Containers should be thoroughly emptied before disposal because of the risk of an explosion. Environmental Manager must be informed of all major spillages.

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) 3113
UN No. (IMDG) 3113
UN No. (ICAO) 3113
UN No. (ADN) 3113

14.2. UN proper shipping name

Proper Shipping name(ADR/RID) ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED (tert-BUTYL PEROXY-2-ETHYLHEXANOATE)
Proper Shipping name (IMDG) ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED (tert-BUTYL PEROXY-2-ETHYLHEXANOATE)
Proper Shipping name (ICAO) ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED (tert-BUTYL PEROXY-2-ETHYLHEXANOATE)

SAFETY DATA SHEET**EFOX 10**

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

Proper Shipping name (ADN) ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED
(tert-BUTYL PEROXY-2-ETHYLHEXANOATE)**14.3. Transport hazard class(es)**

ADR/RID class	5.2
ADR/RID label	5.2
IMDG class	5.2
ICAO class/division	5.2
ADN class	5.2

Transport labels**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-F, S-R**Emergency Action Code** 2WE**Tunnel restriction code** (D)**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code****Transport in bulk according to** No data available.**Annex II of MARPOL**

SAFETY DATA SHEET**EFOX 10**

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

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.

EU legislation

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).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information**Key literature references and sources for data**

This SDS is prepared based on the information received from the product owner.

Classification procedures according to Regulation (EC) 1272/2008

Skin Sens. 1 - H317; Repr. 1B - H360F; Aquatic Acute 1 - H400; Aquatic Chronic 2 - H411: Calculation Method. Org. Perox. C - H242: Expert Judgement

Training advice

Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Revision comments

The SDS is generated in accordance with the 1907/2006 REACH and 1272/2008 CLP regulations.

Issued By

Simge ARIK - lab@akpakimya.com +90 282 361 80 99

Issued Date

23.01.2014

Revision date

07.07.2021

Revision

5.0

Hazard statements in full**H242**

Heating may cause a fire.

H317

May cause an allergic skin reaction.

H360F

May damage fertility.

SAFETY DATA SHEET**EFOX 10**

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

H400

Very toxic to aquatic life.

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.