

## **EHPC-50-ENF1**

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
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### **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

#### **1.1 Product identifier**

Trade name : EHPC-50-ENF1

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

Use of the Sub-  
stance/Mixture : polymerisation initiators

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

Company : United Initiators GmbH & Co. KG  
Dr. Gustav-Adolph-Str. 3  
D-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)

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### **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.
Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, Category 1	H370: Causes damage to organs.

#### **2.2 Label elements**

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

Hazard pictograms : 

Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.  
H242 Heating may cause a fire.

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H318	Causes serious eye damage.
	H370	Causes damage to organs.
Precautionary statements	: <b>Prevention:</b>	
	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.
	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.
	P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	<b>Response:</b>	
	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 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/ physician.
	P315	Get immediate medical advice/ attention.
	P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P362 + P364	Take off contaminated clothing and wash it before reuse.
	<b>Storage:</b>	
	P403 + P235	Store in a well-ventilated place. Keep cool.
	P411	Store at temperatures not exceeding -20 °C.
	<b>Disposal:</b>	
	P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

bis(2-ethylhexyl) peroxydicarbonate (CAS-No. 16111-62-9)  
Methanol (CAS-No. 67-56-1)

### 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

## EHPC-50-ENF1

Version  
1.0

Revision Date:  
20.06.2016

MSDS Number:  
600000000287

Print Date:  
20.06.2016

Liquid mixture

### Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
bis(2-ethylhexyl) peroxydicarbonate	16111-62-9 240-282-4 01-2119964452-35	Flam. Liq. 3; H226 Org. Perox. C; H242 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317	>= 45 - < 50
Methanol	67-56-1 200-659-6 01-2119433307-44	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	>= 10 - < 15

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.  
Call a physician immediately.
- Protection of first-aiders : First Aid responders should pay attention to self-protection  
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.
- 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.  
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 tis-  
sue 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.

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.  
Do NOT induce vomiting.  
Call a physician immediately.  
Rinse mouth thoroughly with water.

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

Risks : Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
Causes damage to organs.

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

Treatment : Treat symptomatically and supportively.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : High volume water jet

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite.  
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

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

be disposed of in accordance with local regulations.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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### 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.  
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.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

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

Advice on safe handling : Do not swallow.

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## **EHPC-50-ENF1**

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

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 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 combustible material.
- Hygiene measures : 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.
- Storage class (TRGS 510) : 5.2, Organic peroxides and self-reacting hazardous materials
- Recommended storage temperature : < -15 °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.

## EHPC-50-ENF1

Version  
1.0

Revision Date:  
20.06.2016

MSDS Number:  
600000000287

Print Date:  
20.06.2016

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Methanol	Methanol	TWA	200 ppm 260 mg/m <sup>3</sup>	2006/15/EC
Further information	Indicative, Identifies the possibility of significant uptake through the skin			
		AGW	200 ppm 270 mg/m <sup>3</sup>	DE TRGS 900
Peak-limit: excursion factor (category)	4;(II)			
Further information	Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission), European Union (The EU has established a limit value: deviations in value and peak limit are possible), Skin absorption, When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

##### Biological occupational exposure limits

Substance name	CAS-No.	Control parameters	Sampling time	Basis
Methanol	67-56-1	Methanol: 30 mg/l (Urine)	Immediately after exposition or after working hours, In case of long-term exposition: after more than one shift	TRGS 903

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

Substance name	End Use	Exposure routes	Potential health effects	Value
bis(2-ethylhexyl) peroxydicarbonate	Workers	Inhalation	Long-term systemic effects	11,75 mg/m <sup>3</sup>
bis(2-ethylhexyl) peroxydicarbonate	Workers	Skin contact	Long-term systemic effects	6,67 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
bis(2-ethylhexyl) peroxydicarbonate	Fresh water	0,032 mg/l
bis(2-ethylhexyl) peroxydicarbonate	Marine water	0,0032 mg/l
bis(2-ethylhexyl) peroxydicarbonate	Intermittent use/release	0,094 mg/l
bis(2-ethylhexyl) peroxydicarbonate	Sewage treatment plant	1,5 mg/l

## EHPC-50-ENF1

Version 1.0      Revision Date: 20.06.2016      MSDS Number: 600000000287      Print Date: 20.06.2016

bis(2-ethylhexyl) peroxydicarbonate	Fresh water sediment	0,228 mg/kg
bis(2-ethylhexyl) peroxydicarbonate	Marine sediment	0,0228 mg/kg
bis(2-ethylhexyl) peroxydicarbonate	Soil	0,0269 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 : >= 480 min  
Glove thickness : 0,5 mm

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 : white  
Odour : aromatic  
pH : No data available  
Melting point/range : No data available  
Boiling point/boiling range : Decomposition: Decomposes below the boiling point.  
Flash point : 37 °C  
Method: ISO 3679  
Flammability (solid, gas) : Not applicable



## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Density : 0,93 g/cm<sup>3</sup> (20 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Viscosity

Viscosity, dynamic : 150 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) : 0 °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.

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## 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

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.

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

### 10.5 Incompatible materials

Materials to avoid : Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

### 10.6 Hazardous decomposition products

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

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Not classified based on available information.

#### Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg  
Method: Calculation method

#### Components:

##### **bis(2-ethylhexyl) peroxydicarbonate:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

#### **Methanol:**

Acute oral toxicity : Acute toxicity estimate: 300 mg/kg  
Method: Expert judgement

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Expert judgement  
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute dermal toxicity : Acute toxicity estimate: 300 mg/kg

## EHPC-50-ENF1

Version  
1.0

Revision Date:  
20.06.2016

MSDS Number:  
600000000287

Print Date:  
20.06.2016

---

Method: Expert judgement

### **Skin corrosion/irritation**

Causes skin irritation.

#### **Product:**

Remarks: Extremely corrosive and destructive to tissue.

#### **Components:**

##### **bis(2-ethylhexyl) peroxydicarbonate:**

Species: Rabbit

Method: OECD Test Guideline 404

Result: Skin irritation

##### **Methanol:**

Species: Rabbit

Result: No skin irritation

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

Causes serious eye damage.

#### **Product:**

Remarks: May cause irreversible eye damage.

#### **Components:**

##### **bis(2-ethylhexyl) peroxydicarbonate:**

Species: Rabbit

Result: Risk of serious damage to eyes.

Remarks: Risk of serious damage to eyes.

##### **Methanol:**

Species: Rabbit

Result: No eye irritation

### **Respiratory or skin sensitisation**

Skin sensitisation: May cause an allergic skin reaction.

Respiratory sensitisation: Not classified based on available information.

#### **Product:**

Remarks: Causes sensitisation.

#### **Components:**

##### **bis(2-ethylhexyl) peroxydicarbonate:**

Species: Guinea pig

Method: OECD Test Guideline 406

Result: May cause sensitisation by skin contact.

##### **Methanol:**

Exposure routes: Skin contact

Species: Guinea pig

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

Method: OECD Test Guideline 406  
Result: Does not cause skin sensitisation.

### **Germ cell mutagenicity**

Not classified based on available information.

#### **Components:**

##### **bis(2-ethylhexyl) peroxydicarbonate:**

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

: Method: OECD Test Guideline 487  
Result: negative

Genotoxicity in vivo : Remarks: No data available

##### **Methanol:**

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

Genotoxicity in vivo : Species: Mouse  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative

### **Carcinogenicity**

Not classified based on available information.

#### **Components:**

##### **Methanol:**

Species: Mouse  
Application Route: inhalation (vapour)  
Exposure time: 18 Months  
Method: OECD Test Guideline 453  
Result: negative

### **Reproductive toxicity**

Not classified based on available information.

#### **Components:**

##### **Methanol:**

Effects on fertility : Species: Rat  
Application Route: inhalation (vapour)  
Method: OECD Test Guideline 416  
Result: negative

### **STOT - single exposure**

Causes damage to organs.

#### **Components:**

##### **Methanol:**

Assessment: Causes damage to organs.

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

### STOT - repeated exposure

Not classified based on available information.

### Repeated dose toxicity

#### Components:

##### **Methanol:**

Species: Rat  
NOAEL: 1,06 mg/l  
Application Route: inhalation (vapour)  
Exposure time: 90 d

Species: Monkey  
LOAEL: 2.340 mg/kg  
Application Route: Oral  
Exposure time: 3 d

### Aspiration toxicity

Not classified based on available information.

### Further information

#### Product:

Remarks: Solvents may degrease the skin.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

##### **bis(2-ethylhexyl) peroxydicarbonate:**

Toxicity to fish	: LC50 (Pimephales promelas (fathead minnow)): 28,3 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 9,4 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	: EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to bacteria	: EC10 (Bacteria): > 20 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC: 1,6 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)

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## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

### **Methanol:**

- Toxicity to fish : NOEC (Danio rerio (zebra fish)): 3.950 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 212
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 18.260 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202
- Toxicity to algae : EC50 (Scenedesmus quadricauda (Green algae)): ca. 22.000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 201
- Toxicity to bacteria : IC50 : > 1.000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209
- Toxicity to fish (Chronic toxicity) : NOEC: 15.800 mg/l  
Exposure time: 200 h  
Species: Oryzias latipes (Orange-red killifish)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 208 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (Cesar models), etc.

## 12.2 Persistence and degradability

### **Components:**

#### **bis(2-ethylhexyl) peroxydicarbonate:**

- Biodegradability : Result: rapidly biodegradable  
Method: OECD Test Guideline 301B

#### **Methanol:**

- Biodegradability : Result: Readily biodegradable

## 12.3 Bioaccumulative potential

### **Components:**

#### **bis(2-ethylhexyl) peroxydicarbonate:**

- Partition coefficient: n-octanol/water : log Pow: 2,73

#### **Methanol:**

- Partition coefficient: n-octanol/water : log Pow: -0,77

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

### 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.  
Toxic to aquatic life.

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## 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.

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## SECTION 14: Transport information

### 14.1 UN number

**ADN** : UN 3119  
**ADR** : UN 3119  
**RID** : Not permitted for transport  
**IMDG** : UN 3119  
**IATA** : Not permitted for transport

### 14.2 UN proper shipping name

**ADN** : ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED  
(DI-(2-ETHYLHEXYL) PEROXYDICARBONATE)

**ADR** : ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED  
(DI-(2-ETHYLHEXYL) PEROXYDICARBONATE)

---

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

---

**RID** : Not permitted for transport  
**IMDG** : ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED (DI-(2-ETHYLHEXYL)PEROXYDICARBONATE)  
**IATA** : Not permitted for transport

### 14.3 Transport hazard class(es)

**ADN** : 5.2  
**ADR** : 5.2  
**RID** : Not permitted for transport  
**IMDG** : 5.2  
**IATA** : Not permitted for transport

### 14.4 Packing group

**ADN**  
Packing group : Not assigned by regulation  
Classification Code : P2  
Hazard Identification Number : 539  
Labels : 5.2

**ADR**  
Packing group : Not assigned by regulation  
Classification Code : P2  
Hazard Identification Number : 539  
Labels : 5.2  
Tunnel restriction code : (D)

**RID** : Not permitted for transport

**IMDG**  
Packing group : Not assigned by regulation  
Labels : 5.2  
EmS Code : F-F, S-R

**IATA (Cargo)** : Not permitted for transport

**IATA (Passenger)** : Not permitted for transport

### 14.5 Environmental hazards

**ADN**  
Environmentally hazardous : no

**ADR**  
Environmentally hazardous : no

**RID** : Not permitted for transport

**IMDG**  
Marine pollutant : no



## **EHPC-50-ENF1**

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
----------------	------------------------------	------------------------------	---------------------------

### **14.6 Special precautions for user**

Temperature controlled transport.:  
Control temperature : -20 °C  
Emergency temperature : -10 °C

### **14.7 Transport in bulk according to Annex II of MARPOL 73/78 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**

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
H3	STOT SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE	50 t	200 t
P6b	SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES	50 t	200 t

Water contaminating class (Germany) : WGK 2 water endangering

TA Luft List (Germany) : Total dust:  
Not applicable  
Inorganic substances in powdered form:  
Not applicable  
Inorganic substances in vapour or gaseous form:  
Not applicable  
Organic Substances:  
Not applicable  
Carcinogenic substances:  
Not applicable  
Mutagenic:  
Not applicable

## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
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Other regulations

Toxic to reproduction:  
Not applicable

: 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.

Gefahrengruppe nach § 3 BGV B4: IV (German regulatory requirements)

**The components of this product are reported in the following inventories:**

CH INV (CH) : On the inventory, or in compliance with the inventory

TSCA (US) : On TSCA Inventory

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

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

### 15.2 Chemical Safety Assessment

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

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## SECTION 16: Other information

### Full text of H-Statements

H225 : Highly flammable liquid and vapour.  
H226 : Flammable liquid and vapour.  
H242 : Heating may cause a fire.  
H301 : Toxic if swallowed.  
H311 : Toxic in contact with skin.  
H315 : Causes skin irritation.  
H317 : May cause an allergic skin reaction.  
H318 : Causes serious eye damage.  
H331 : Toxic if inhaled.  
H370 : Causes damage to organs.

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## EHPC-50-ENF1

Version 1.0	Revision Date: 20.06.2016	MSDS Number: 600000000287	Print Date: 20.06.2016
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### Full text of other abbreviations

Acute Tox.	: Acute toxicity
Eye Dam.	: Serious eye damage
Flam. Liq.	: Flammable liquids
Org. Perox.	: Organic peroxides
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT SE	: Specific target organ toxicity - single exposure

(Q)SAR - (Quantitative) Structure Activity Relationship; 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; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; DIN - Standard of the German Institute for Standardisation; 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; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; 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; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; 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; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; 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; TRGS - Technical Rule for Hazardous Substances; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Existing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice

### 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.

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