

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519

## TRIGONOX K-80 (IBC)

Version 4

Revision Date: 2021/09/01  
Date of first issue: 22.01.2015

Print Date: 2023/03/14

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### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Information  
Trade name : TRIGONOX K-80 (IBC)

Use of the Substance/Mixture : Specific use(s): Polymerization initiator

Company : Nouryon Functional Chemicals B.V.  
Haaksbergweg 88  
NL 1101 BZ Amsterdam  
Netherlands

Telephone : +31889840367  
Telefax :  
E-mail address : polymer.emeia@nouryon.com  
Emergency telephone number : 24 hours:+31 57 06 79211, US-CHEMTREC:1-800-424-9300,  
CA-CANUTEC:1-613-996-6666, JP: +81 (836) 74 8810, CN:  
化学事故应急咨询电话 : +86 532 8388 9090

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

<b>Appearance</b>	
Form	liquid
Colour	colourless, light yellow
Odour	aromatic
<b>GB 6944/12268</b>	
UN number	UN 3109
Proper shipping name	ORGANIC PEROXIDE TYPE F, LIQUID (Cumyl hydroperoxide)
Class	5.2
Subsidiary risk	8
Packing group	Not Assigned
<b>Hazard Summary</b>	
General advice	Immediate medical attention is required. Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later.
<b>Physical and chemical</b>	Heating may cause a fire.

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hazards	
<b>Health hazards</b>	
Inhalation	Inhalation of aerosols may cause irritation to mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours. Contains organic solvents. Toxic if inhaled. May cause respiratory irritation. May be fatal if swallowed and enters airways. Inhalation may cause central nervous system effects.
Skin	Symptoms may be delayed. Harmful in contact with skin. Causes severe skin burns.
Eyes	Causes serious eye damage.
Ingestion	Harmful if swallowed. Causes burns. May be fatal if swallowed and enters airways.
<b>Environmental hazards</b>	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## GHS Classification

Organic peroxides, Type F

Acute toxicity, Category 4, Oral

Acute toxicity, Category 3, Inhalation

Acute toxicity, Category 4, Dermal

Skin corrosion/irritation, Category 1B

Serious eye damage/eye irritation, Category 1

Specific target organ toxicity - repeated exposure, Category 2

Aspiration hazard, Category 1

Short-term (acute) aquatic hazard, Category 2

Long-term (chronic) aquatic hazard, Category 2

## GHS label elements

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H242 Heating may cause a fire.  
H302 + H312 Harmful if swallowed or in contact with skin.  
H304 May be fatal if swallowed and enters airways.  
H314 Causes severe skin burns and eye damage.  
H331 Toxic if inhaled.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

: **Prevention:**  
P210 Keep away from heat/ sparks/ open flames/ hot surfaces.  
No smoking.  
P220 Keep/ Store away from clothing/ combustible materials.  
P234 Keep only in original container.  
P235 Keep cool.

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P260 Do not breathe mist, vapours or spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

## Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P314 Get medical advice/ attention if you feel unwell.

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

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

P391 Collect spillage.

## Storage:

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

P405 Store locked up.

P410 Protect from sunlight.

P420 Store away from other materials.

## Disposal:

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

## Physical and chemical hazards

Heating may cause a fire.

## Health hazards

Inhalation : Inhalation of aerosols may cause irritation to mucous membranes.  
Thermal decomposition can lead to release of irritating gases and vapours.  
Contains organic solvents.  
Toxic if inhaled.  
May cause respiratory irritation.  
May be fatal if swallowed and enters airways.  
Inhalation may cause central nervous system effects.

Skin : Symptoms may be delayed.  
Harmful in contact with skin.  
Causes severe skin burns.

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Eyes : Causes serious eye damage.

Ingestion : Harmful if swallowed.  
Causes burns.  
May be fatal if swallowed and enters airways.

Further information : Solvents may degrease the skin.

## Test result

Acute oral toxicity : Acute toxicity estimate: 450.5 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 0.6251 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 1,375 mg/kg  
Method: Calculation method

## Environmental hazards

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Other hazards

No further data available.

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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name : Organic peroxide  
Chemical nature : Substance

### Hazardous substance

Chemical name	CAS-No.	Classification	Concentration [%]
Cumyl hydroperoxide	80-15-9	Org. Perox. E; H242 Acute Tox. 4; H302 Acute Tox. 3; H331 Acute Tox. 4; H312 Skin Corr./Irrit. 1B; H314 Eye Dam./Irrit. 1; H318 STOT RE 2; H373 Aquatic Acute 2; H401 Aquatic Chronic 2; H411	$\geq 80 - \leq 85$
Cumene	98-82-8	Flam. Liq. 3; H226 Acute Tox. 5; H303 STOT SE 3; H335 Asp. Tox. 1; H304 Aquatic Acute 2; H401 Aquatic Chronic 2; H411	$\geq 7 - \leq 13$
2-Phenylisopropanol	617-94-7	Flam. Liq. 4; H227 Acute Tox. 4; H302 Skin Corr./Irrit. 2; H315 Eye Dam./Irrit. 2A; H319	$\geq 5 - \leq 8$
Acetophenone	98-86-2	Flam. Liq. 4; H227 Acute Tox. 4; H302 Eye Dam./Irrit. 2A; H319	$\geq 0.5 - \leq 1.5$
Dicumyl peroxide	80-43-3	Org. Perox. F; H242 Skin Corr./Irrit. 2; H315 Eye Dam./Irrit. 2A; H319 Repr. 2; H361 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	$\geq 0.46 - \leq 0.65$

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

General advice : Immediate medical attention is required.  
Move out of dangerous area.

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Show this safety data sheet to the doctor in attendance.  
Symptoms of poisoning may appear several hours later.

- Inhalation : If breathed in, move person into fresh air.  
Call a physician or poison control centre immediately.  
Remove to fresh air.  
Keep patient warm and at rest.  
If unconscious, place in recovery position and seek medical advice.  
Keep respiratory tract clear.
- Skin contact : Take off contaminated clothing and shoes immediately.  
Rinse immediately with plenty of water.  
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.  
If skin irritation persists, call a physician.
- Eye contact : Rinse with plenty of water.  
Get medical attention immediately. Continue to rinse during transport.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
- Ingestion : Clean mouth with water and drink afterwards plenty of water.  
Never give anything by mouth to an unconscious person.  
Take victim immediately to hospital.  
Do not induce vomiting! May cause chemical burns in mouth and throat.

## Notes to physician

- Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.
- Risks : Harmful if swallowed or in contact with skin.  
May be fatal if swallowed and enters airways.  
Causes serious eye damage.  
Toxic if inhaled.  
May cause damage to organs through prolonged or repeated exposure.  
Causes severe burns.
- Treatment : Treat symptomatically.

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## 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Specific hazards during firefighting / Specific hazards : CAUTION: reignition may occur.  
Supports combustion.

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arising from the chemical	Water spray may be ineffective unless used by experienced firefighters. Do not allow run-off from fire fighting to enter drains or water courses. Hazardous decomposition products formed under fire conditions.
Combustion products	: Carbon oxides
Special protective equipment for firefighters	: In the event of fire, wear self-contained breathing apparatus.
Further information	: Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Personal precautions	: Use personal protective equipment. Wear respiratory protection. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Emergency measures on accidental release	: Evacuate personnel to safe areas. Only qualified personnel equipped with suitable protective equipment may intervene. Prevent unauthorised persons entering the zone.
Environmental precautions	: Prevent product from entering drains. Discharge into the environment must be avoided.
Methods for cleaning up / Methods for containment	: Soak up with inert absorbent material and dispose of as hazardous waste. Use only inert inorganic material such as vermiculite or perlite as absorbent. Keep mixture of absorbent material and spilled product wetted with water. Confinement must be avoided. Never return spills in original containers for re-use.
Reference to other sections	: For disposal considerations see section 13.  For personal protection see section 8.

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## 7. HANDLING AND STORAGE

### Handling

Advice on safe handling	: For personal protection see section 8. Avoid formation of aerosol.
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Do not breathe vapours or spray mist.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Open drum carefully as content may be under pressure.  
Dispose of rinse water in accordance with local and national regulations.  
Obtain special instructions before use.

Advice on protection against fire and explosion : Use explosion protected equipment.  
Keep away from sources of ignition - No smoking.  
No sparking tools should be used.  
Keep away from reducing agents (e.g. amines), acids, alkalies and heavy metal compounds (e.g. accelerators, driers, metal soaps).  
Do not cut or weld on or near this container even when empty.  
Keep away from combustible material.

Temperature class : It is recommended to use electrical equipment of temperature group T3. However, autoignition can never be excluded.

## Storage

Requirements for storage areas and containers : Prevent unauthorized access.  
No smoking.  
Keep in a well-ventilated place.  
Electrical installations / working materials must comply with the technological safety standards.  
Keep only in original container.  
Store away from other materials.

Minimum storage temperature: : Avoid temperatures below:  
-30 °C

Maximum storage temperature: : 40 °C

Other data : If product freezes or separates, contact the manufacturer.  
  
Maximum storage temperature is for quality only.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Acetophenone, Acetophenone	98-86-2	TWA	10 ppm	ACGIH

Engineering measures : Explosion proof ventilation recommended.



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Effective exhaust ventilation system  
Ensure that eyewash stations and safety showers are close to the workstation location.

## Personal protective equipment

- Respiratory protection : In the case of vapour or aerosol formation use a respirator with an approved filter.  
Filter A
- Eye/face protection : Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : Protective suit
- Hand protection  
Material : Neoprene  
Material : Nitrile rubber
- Hygiene measures : Avoid contact with skin, eyes and clothing.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and immediately after handling the product.

## Environmental exposure controls

- General advice : Prevent product from entering drains.  
Discharge into the environment must be avoided.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Colour : colourless, light yellow
- Odour : aromatic
- Odour Threshold : No data available
- pH : Not applicable
- Melting point : -30 °C
- Boiling point/boiling range : Decomposes below the boiling point.
- Flash point : Not applicable
- Evaporation rate : 0.06  
(n-Butyl acetate = 1)
- Flammability (liquids) : Decomposition products may be flammable.

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Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	20 hPa (20 °C)
Relative vapour density	:	4.1 Solvent (Air = 1.0)
Relative density	:	1.06 (20 °C)
Bulk density	:	Not applicable
Solubility(ies)		
Water solubility	:	partly miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	Test method not applicable
Decomposition temperature	:	SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.
Self-Accelerating decomposition temperature (SADT)	:	70 °C
Viscosity		
Viscosity, dynamic	:	37.3 mPa.s ( 20 °C)
Viscosity, kinematic	:	ca. 35.19 mm <sup>2</sup> /s ( 20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	Not classified as oxidising.
Active Oxygen Content	:	8.5 %
Organic peroxides	:	81 %

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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## 10. STABILITY AND REACTIVITY

Conditions to avoid	: A high degree of confinement must be avoided. Heat, flames and sparks.
Materials to avoid	: Contact with the following incompatible materials will result in hazardous decomposition: Acids and bases Iron Copper Reducing agents Heavy metals Rust Do not mix with peroxide accelerators, unless under controlled processing. Use only stainless steel 316, PP, polyethylene or glass-lined equipment. For queries regarding the suitability of other materials please contact the supplier.
Hazardous decomposition products	: Acetophenone Methane 2-Phenylisopropanol
Thermal decomposition	: SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.
Reactivity	: Stable under normal conditions.
Chemical stability	: Stable under recommended storage conditions.
Hazardous reactions	: No dangerous reaction known under conditions of normal use.
Self-Accelerating decomposition temperature (SADT)	: 70 °C

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## 11. TOXICOLOGICAL INFORMATION

### PRODUCT INFORMATION:

#### Hazard Summary

Acute toxicity	: Harmful if swallowed or in contact with skin. Toxic if inhaled.
Skin corrosion/irritation	: Causes severe burns.
Serious eye damage/eye irritation	: Causes serious eye damage.
Respiratory or skin	: Respiratory sensitisation: Not classified based on available

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sensitisation	information. Skin sensitisation: Not classified based on available information.
Germ cell mutagenicity	: Not classified based on available information.
Carcinogenicity	: Not classified based on available information.
Reproductive toxicity	: Not classified based on available information.
STOT - single exposure	: Not classified based on available information.
STOT - repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.

## Potential Health Effects

Inhalation	: Inhalation of aerosols may cause irritation to mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours. Contains organic solvents. Toxic if inhaled. May cause respiratory irritation. May be fatal if swallowed and enters airways. Inhalation may cause central nervous system effects.
Skin	: Symptoms may be delayed. Harmful in contact with skin. Causes severe skin burns.
Eyes	: Causes serious eye damage.
Ingestion	: Harmful if swallowed. Causes burns. May be fatal if swallowed and enters airways.
Aggravated Medical Condition	: None known.
Symptoms of Overexposure	: The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

## Toxicology Assessment

Further information	: Solvents may degrease the skin.
<b>Test result</b>	
Acute oral toxicity	: Acute toxicity estimate: 450.5 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate : 0.6251 mg/l Exposure time: 4 h Test atmosphere: dust/mist

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Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 1,375 mg/kg  
Method: Calculation method

## TOXICOLOGY DATA FOR THE COMPONENTS:

### Toxicology Assessment

#### **Component: Cumyl hydroperoxide**

CMR effects : Mutagenicity: Not mutagenic.

Further information : May cause damage to organs through prolonged or repeated exposure.

#### **Component: Cumene**

Further information : Solvents may degrease the skin.

#### **Component: Dicumyl peroxide**

CMR effects : Reproductive toxicity: Some evidence of adverse effects on development, based on animal experiments.

### Test result

#### **Component: Cumyl hydroperoxide**

Acute oral toxicity : LD50 Oral: 382 mg/kg  
Species: Rat

Acute inhalation toxicity : LC50 : 1.370 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The component/mixture is toxic after short term inhalation.

Acute dermal toxicity : LD50: 1,200 - 1,520 mg/kg  
Species: Rat

LD50: 134 mg/kg  
Species: Rabbit

Skin irritation : Species: Rabbit  
Result: Causes burns.

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Classification: Category 1B

Sensitisation	: Result: Not sensitizing.
Germ cell mutagenicity Genotoxicity in vitro	: Result: Evidence of genotoxic effects in vitro.
Genotoxicity in vivo	: Result: No evidence of genotoxic effects in vivo.
Carcinogenicity	: No data available
Reproductive toxicity	: No data available
Target Organ Systemic Toxicant - Repeated exposure	: Exposure routes: Inhalation The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

## **Component: Cumene**

Acute oral toxicity	: LD50: > 2,000 mg/kg Species: Rat
Target Organ Systemic Toxicant - Single exposure	: Exposure routes: Inhalation May cause respiratory irritation.
Aspiration toxicity	: May be fatal if swallowed and enters airways.

## **Component: 2-Phenylisopropanol**

Acute oral toxicity	: LD50: 1,300 mg/kg Species: Rat Information taken from reference works and the literature.
Skin irritation	: Classification: Irritating to skin. Information taken from reference works and the literature.
Eye irritation	: Classification: Irritating to eyes. Information taken from reference works and the literature.

## **Component: Acetophenone**

Acute oral toxicity	: LD50: 301 - 2,000 mg/kg
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## **Component: Dicumyl peroxide**

Acute oral toxicity	: LD50: > 2,000 mg/kg Species: Rat Method: OECD Test Guideline 401
Acute dermal toxicity	: LD50: > 2,000 mg/kg Species: Rat Method: OECD Test Guideline 402

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Skin irritation	: Classification: Irritating to skin. Irritating to skin.
Eye irritation	: Classification: Mild eye irritation Causes eye irritation.
Sensitisation	: Local lymph node assay (LLNA) Species: Mouse Result: Not a skin sensitizer. Method: OECD Test Guideline 429
Repeated dose toxicity	: Species: Rat NOAEL: 80 mg/kg bw/day Method: OECD Test Guideline 408
Germ cell mutagenicity Genotoxicity in vitro	: reverse mutation assay Result: negative Method: OECD Test Guideline 471  In vitro cytogenicity study in mammalian cells Chinese hamster lung cells Result: negative Method: OECD Test Guideline 473  In vitro mammalian cell gene mutation test Chinese hamster lung fibroblasts Result: negative Method: OECD Test Guideline 476
Reproductive toxicity/Development/Teratog enicity	: Species: Rat General Toxicity Maternal: No observed adverse effect level: 150 mg/kg bw/day Developmental Toxicity: No observed adverse effect level: 150 mg/kg bw/day Method: OECD Test Guideline 414 Adverse developmental effects were observed  Species: Rabbit General Toxicity Maternal: No observed adverse effect level: 50 mg/kg bw/day Developmental Toxicity: No observed adverse effect level: 150 mg/kg bw/day Method: OECD Test Guideline 414 No significant adverse effects were reported

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## 12. ECOLOGICAL INFORMATION

### PRODUCT INFORMATION:

#### Ecotoxicology Assessment

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## COMPONENTS:

### Ecotoxicology Assessment

#### Component: Cumyl hydroperoxide

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

#### Component: Cumene

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

## Test result

### Component: Cumyl hydroperoxide

#### Ecotoxicity effects

- Toxicity to fish : LC50: 3.9 mg/l  
Exposure time: 96 h  
Species: Oncorhynchus mykiss (rainbow trout)  
Test Type: semi-static test  
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : NOEC: 9.15 mg/l  
Exposure time: 48 h  
Species: Daphnia (water flea)  
Test Type: static test  
Method: OECD Test Guideline 202
- EC50: 18.84 mg/l  
Exposure time: 48 h  
Species: Daphnia (water flea)  
Test Type: static test  
Method: OECD Test Guideline 202
- Toxicity to algae : EC50: 3.1 mg/l  
Exposure time: 72 h  
Species: Desmodesmus subspicatus (green algae)  
Test Type: static test  
Method: OECD Test Guideline 201
- NOEC: 1.0 mg/l  
Exposure time: 72 h  
Species: Desmodesmus subspicatus (green algae)  
Test Type: static test  
Method: OECD Test Guideline 201
- Toxicity to bacteria : Toxicity Threshold (EC3): > 50 mg/l  
Exposure time: 16 h  
Species: Pseudomonas putida  
Test Type: Growth inhibition



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## **Elimination information (persistence and degradability)**

Bioaccumulation : Bioconcentration factor (BCF): < 1

Biodegradability : Result: Not readily biodegradable.

## **Component: Cumene**

### **Ecotoxicity effects**

Toxicity to daphnia and other aquatic invertebrates : EC50: > 1 - 10 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Information taken from reference works and the literature.

## **Elimination information (persistence and degradability)**

Bioaccumulation : No data available

Mobility : No data available

Biodegradability : Result: Not readily biodegradable.

## **Further information on ecology**

Biochemical Oxygen Demand (BOD) : No data available

## **Component: 2-Phenylisopropanol**

### **Ecotoxicity effects**

Toxicity to fish : LC50: Species: Fish  
No data available

## **Component: Dicumyl peroxide**

### **Ecotoxicity effects**

Toxicity to fish : LC50: 0.469 mg/l  
Exposure time: 96 h  
Species: Oryzias latipes (Japanese medaka)  
Test Type: semi-static test  
Method: OECD Test Guideline 203  
No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50: > 0.397 mg/l  
Exposure time: 48 h  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Method: OECD Test Guideline 202  
No toxicity at the limit of solubility

Toxicity to algae : Exposure time: 72 h

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Species: Pseudokirchneriella subcapitata (green algae)  
Test Type: static test  
Method: OECD Test Guideline 201  
No toxicity at the limit of solubility

Toxicity to bacteria : NOEC: > 1,000 mg/l  
Exposure time: 0.5 h  
Species: activated sludge  
Test Type: static test  
Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.117 mg/l  
Exposure time: 21 d  
reproduction rate  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Method: OECD Test Guideline 211

## Elimination information (persistence and degradability)

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Exposure time: 56 d  
Temperature: 25 °C  
Concentration: 0.01 mg/l  
Bioconcentration factor (BCF): 137 - 1,470  
Method: OECD Test Guideline 305C

Biodegradability : Test Type: Ready biodegradability  
Inoculum: Activated sludge, domestic, non-adapted  
Concentration: 20 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 44 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F  
GLP: yes

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## 13. DISPOSAL CONSIDERATIONS

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 contents/container in accordance with local regulation.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not burn, or use a cutting torch on, the empty drum.  
Due to the high risk of contamination recycling/recovery is not recommended.  
Follow all warnings even after the container is emptied.

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## 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

UN/ID No. : UN 3109  
Proper shipping name : Organic peroxide type F, liquid  
(Cumyl hydroperoxide)  
Class : 5.2  
Subsidiary risk : 8, HEAT  
Packing group : Not Assigned  
Labels : 5.2 (8, HEAT)  
Packing instruction (cargo aircraft) : 570  
Packing instruction (passenger aircraft) : 570  
Environmentally hazardous : yes

#### IMDG-Code

UN number : UN 3109  
Proper shipping name : ORGANIC PEROXIDE TYPE F, LIQUID  
(Cumyl hydroperoxide)  
Class : 5.2  
Subsidiary risk : 8  
Packing group : Not Assigned  
Labels : 5.2 (8)  
EmS Code : F-J, S-R  
Marine pollutant : yes  
(Cumyl hydroperoxide)

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

Not applicable for product as supplied.

### National Regulations

#### GB 6944/12268

UN number : UN 3109  
Proper shipping name : ORGANIC PEROXIDE TYPE F, LIQUID  
(Cumyl hydroperoxide)  
Class : 5.2  
Subsidiary risk : 8  
Packing group : Not Assigned  
Labels : 5.2 (8)  
Environmentally hazardous : yes

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## 15. REGULATORY INFORMATION

### Notification status

TCSI : YES. On the inventory, or in compliance with the inventory  
TSCA : YES. All substances listed as active on the TSCA inventory  
AIIC : YES. On the inventory, or in compliance with the inventory  
DSL : YES. All components of this product are on the Canadian DSL  
ENCS : YES. On the inventory, or in compliance with the inventory  
ISHL : YES. On the inventory, or in compliance with the inventory  
KECI : YES. On the inventory, or in compliance with the inventory  
PICCS : YES. On the inventory, or in compliance with the inventory  
IECSC : YES. On the inventory, or in compliance with the inventory

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NZIoC : YES. On the inventory, or in compliance with the inventory

For explanation of abbreviation see section 16.

## National regulatory information

Hazardous Chemicals for Priority Management under SAWS : Not applicable

China Severely Restricted Toxic Chemicals for Import and Export : Not applicable

Catalogue of Hazardous Chemicals : Cumyl hydroperoxide Listed

## Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Listed

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

Category	Threshold quantity
Organic peroxides	50 t

Further information : none

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## 16. OTHER INFORMATION

### Full text of H-Statements

H226 : Flammable liquid and vapour.  
H227 : Combustible liquid.  
H242 : Heating may cause a fire.  
H302 : Harmful if swallowed.  
H303 : May be harmful if swallowed.  
H304 : May be fatal if swallowed and enters airways.  
H312 : Harmful in contact with skin.  
H314 : Causes severe skin burns and eye damage.  
H315 : Causes skin irritation.  
H318 : Causes serious eye damage.  
H319 : Causes serious eye irritation.  
H331 : Toxic if inhaled.  
H335 : May cause respiratory irritation.  
H361 : Suspected of damaging fertility or the unborn child.  
H373 : May cause damage to organs through prolonged or repeated exposure.  
H400 : Very toxic to aquatic life.  
H401 : Toxic to aquatic life.  
H410 : Very toxic to aquatic life with long lasting effects.  
H411 : Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

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

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AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

## Further information

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

This data sheet contains changes from the previous version in section(s):

Hazards identification

Composition/information on ingredients

Toxicological information

Ecological 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.