

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878

TRIGONOX 289-IN VRN

Version	Revision Date:	CZ / EN	Date of last issue: 19.12.2022
4.0	30.06.2023		Date of first issue: 17.06.2019

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

1.1 Product identifier

Trade name : TRIGONOX 289-IN VRN

UFI : MDP2-M0YV-800T-4RD9

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

Use of the Substance/Mixture : Curing agent

1.3 Details of the supplier of the safety data sheet

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

Telephone : +31889840367

E-mail address of person responsible for the SDS : polymer.emeia@nouryon.com

1.4 Emergency telephone number

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-:
Nouryon Emergency Response Centre: +31 570 679211
Poison Centre: 224 91 92 93

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Organic peroxides, Type D	H242: Heating may cause a fire.
Acute toxicity, Category 4	H302: Harmful if swallowed.
Acute toxicity, Category 4	H332: Harmful if inhaled.

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Acute toxicity, Category 4	H312: Harmful in contact with skin.
Skin corrosion, Sub-category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Carcinogenicity, Category 1B	H350: May cause cancer.
Specific target organ toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	<p>H242 Heating may cause a fire. H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H350 May cause cancer. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.</p>
Precautionary statements	:	<p>Prevention: P201 Obtain special instructions before use. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P234 Keep only in original packaging. P260 Do not breathe mist or vapours. P280 Wear protective gloves/ protective clothing/ eye</p>

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protection/ face protection/ hearing protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P370 + P378 In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.

Hazardous components which must be listed on the label:

Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane
Cumyl hydroperoxide
Cumene

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.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide	1338-23-4 215-661-2 01-2119514691-43	Org. Perox. A; H240 Acute Tox. 4; H302 Acute Tox. 4; H332	>= 25 - <= 30

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and di-sec-butylhexaoxidane		<p>Skin Corr. 1B; H314 Eye Dam. 1; H318</p> <hr/> <p>Acute toxicity estimate</p> <p>Acute oral toxicity: 1.017 mg/kg Acute inhalation toxicity (dust/mist): 1,5 mg/l</p>	
Cumyl hydroperoxide	<p>80-15-9 201-254-7 617-002-00-8 01-2119475796-19</p>	<p>Org. Perox. E; H242 Acute Tox. 4; H302 Acute Tox. 3; H331 Acute Tox. 4; H312 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT RE 2; H373 Aquatic Chronic 2; H411</p> <hr/> <p>specific concentration limit</p> <p>Skin Corr. 1B; H314 ≥ 10 % Skin Irrit. 2; H315 3 - < 10 % Eye Dam. 1; H318 3 - < 10 % Eye Irrit. 2; H319 1 - < 3 % STOT SE 3; H335 ≥ 1 %</p> <hr/> <p>Acute toxicity estimate</p> <p>Acute oral toxicity: 382 mg/kg Acute dermal toxicity: 1.200 mg/kg</p>	≥ 15 - ≤ 20
Methyl benzoate	<p>93-58-3 202-259-7</p>	<p>Acute Tox. 4; H302 Aquatic Chronic 3; H412</p>	≥ 5 - ≤ 10

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		Acute toxicity estimate	
		Acute oral toxicity: 1.177 mg/kg	
2-Phenylisopropanol	617-94-7 210-539-5 01-2119965145-35	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1 - <= 3
		Acute toxicity estimate	
		Acute oral toxicity: 1.300 mg/kg	
Hydrogen peroxide solution	7722-84-1 231-765-0 008-003-00-9 01-2119485845-22	Ox. Liq. 1; H271 Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Corr. 1A; H314 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system) Aquatic Chronic 3; H412	>= 1 - <= 5
		specific concentration limit	
		Ox. Liq. 1; H271 >= 70 %	
		Ox. Liq. 2; H272 50 - < 70 %	
		Skin Corr. 1A; H314 >= 70 %	
		Skin Corr. 1B; H314 50 - < 70 %	
		Skin Irrit. 2; H315 35 - < 50 %	
		Eye Dam. 1; H318 8 - < 50 %	
		Eye Irrit. 2; H319 5 - < 8 %	
		STOT SE 3; H335 >= 35 %	
		Aquatic Chronic 3; H412 >= 63 %	

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		Acute toxicity estimate Acute oral toxicity: 431 mg/kg Acute inhalation toxicity (dust/mist): 1,5 mg/l	
Cumene	98-82-8 202-704-5 601-024-00-X	Flam. Liq. 3; H226 Carc. 1B; H350 STOT SE 3; H335 (Respiratory system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411	< 0,5
Dicumyl peroxide	80-43-3 201-279-3 617-006-00-X 01-2119541688-27	Org. Perox. F; H242 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Repr. 1B; H360D Aquatic Chronic 2; H411	< 0,2
Substances with a workplace exposure limit :			
Diisononyl phthalate	28553-12-0 249-079-5 01-2119430798-28		>= 1 - <= 6

For explanation of abbreviations see section 16.

Remarks : Substances with a workplace exposure limit

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Immediate medical attention is required.
Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
- If inhaled : If breathed in, move person into fresh air.
Consult a physician after significant exposure.
- In case of 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

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- difficulty.
If skin irritation persists, call a physician.
- In case of 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.
- If swallowed : 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.

4.2 Most important symptoms and effects, both acute and delayed

- 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, in contact with skin or if inhaled.
Causes serious eye damage.
May cause respiratory irritation.
May cause cancer.
May cause damage to organs through prolonged or repeated exposure.
Causes severe burns.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during : CAUTION: reignition may occur.

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firefighting

Supports combustion.
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.

Hazardous combustion products : Fire will produce smoke containing hazardous combustion products (see section 10).
Oxygen
Carbon oxides

5.3 Advice for firefighters

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.

SECTION 6: Accidental release measures

6.1 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.
Evacuate personnel to safe areas.
Only qualified personnel equipped with suitable protective equipment may intervene.
Prevent unauthorised persons entering the zone.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Discharge into the environment must be avoided.

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6.3 Methods and material for containment and cleaning up

Methods for cleaning up : 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.

6.4 Reference to other sections

For disposal considerations see section 13.
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Avoid formation of aerosol.
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.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage : Prevent unauthorized access. No smoking. Electrical

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areas and containers installations / working materials must comply with the technological safety standards. Keep only in original container. Store away from other materials.

Further information on storage stability : No decomposition if stored and applied as directed.

Maximum storage temperature is for quality only.

Maximum storage temperature: : 25 °C

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Diisononyl phthalate	28553-12-0	TWA	3 mg/m ³	CZ OEL
		STEL	10 mg/m ³	CZ OEL
Hydrogen peroxide solution	7722-84-1	TWA	1 mg/m ³	CZ OEL
		Further information: irritating to mucous membranes (eyes, respiratory system) respectively skin		
		STEL	2 mg/m ³	CZ OEL
Further information: irritating to mucous membranes (eyes, respiratory system) respectively skin				
Cumene	98-82-8	TWA	20 ppm 100 mg/m ³	2000/39/EC
		Further information: Identifies the possibility of significant uptake through the skin, Indicative		
		STEL	50 ppm 250 mg/m ³	2000/39/EC
Further information: Identifies the possibility of significant uptake through the skin, Indicative				
		TWA	10 ppm 50 mg/m ³	2019/1831/EU
Further information: A skin notation assigned to the occupational exposure limit value indicates the possibility of significant uptake through the skin., Indicative				

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		STEL	50 ppm 250 mg/m ³	2019/1831/E U
	Further information: A skin notation assigned to the occupational exposure limit value indicates the possibility of significant uptake through the skin., Indicative			
		TWA	50 mg/m ³	CZ OEL
	Further information: Contributes significantly to the overall exposure through the skin			
		STEL	250 mg/m ³	CZ OEL
	Further information: Contributes significantly to the overall exposure through the skin			

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Formic acid	64-18-6	TWA	5 ppm 9 mg/m ³	2006/15/EC
	Further information: Indicative			
		TWA	9 mg/m ³	CZ OEL
		STEL	18 mg/m ³	CZ OEL
Organic acid	64-19-7	TWA	10 ppm 25 mg/m ³	2017/164/EU
	Further information: Indicative			
		STEL	20 ppm 50 mg/m ³	2017/164/EU
	Further information: Indicative			
		TWA	25 mg/m ³	CZ OEL
		STEL	50 mg/m ³	CZ OEL
Fatty acid	79-09-4	STEL	20 ppm 62 mg/m ³	2000/39/EC
	Further information: Indicative			
		TWA	10 ppm 31 mg/m ³	2000/39/EC
	Further information: Indicative			
		TWA	30 mg/m ³	CZ OEL
		STEL	60 mg/m ³	CZ OEL
Methyl ethyl ketone	78-93-3	STEL	300 ppm 900 mg/m ³	2000/39/EC
	Further information: Indicative			
		TWA	200 ppm 600 mg/m ³	2000/39/EC
	Further information: Indicative			
		TWA	600 mg/m ³	CZ OEL
	Further information: irritating to mucous membranes (eyes, respiratory			

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	system) respectively skin
	STEL 900 mg/m ³ CZ OEL
	Further information: irritating to mucous membranes (eyes, respiratory system) respectively skin

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Methyl benzoate	Workers	Skin contact	Long-term systemic effects	11 mg/kg
	Workers	Inhalation	Long-term systemic effects	39,3 mg/m ³
	Consumers	Inhalation	Long-term systemic effects	9,68 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	5,57 mg/kg
	Consumers	Ingestion	Long-term systemic effects	5,57 mg/kg
Diisononyl phthalate	Workers	Inhalation	Long-term systemic effects	4,4 mg/m ³
	Consumers	Ingestion	Long-term systemic effects	4,4 mg/kg
	Consumers	Skin contact	Long-term systemic effects	220 mg/kg
	Workers	Skin contact	Long-term systemic effects	366 mg/kg
	Consumers	Inhalation	Long-term systemic effects	15,3 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	0,54 mg/kg
	Consumers	Inhalation	Long-term systemic effects	0,41 mg/m ³
	Consumers	Ingestion	Long-term systemic effects	0,27 mg/kg
	Workers	Skin contact	Long-term systemic effects	1,08 mg/kg
	Workers	Inhalation	Long-term systemic effects	1,9 mg/m ³
	Workers	Inhalation	Acute local effects	3 mg/m ³
Hydrogen peroxide solution	Workers	Inhalation	Long-term local	1,4 mg/m ³

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	Consumers	Inhalation	effects Long-term local effects	0,21 mg/m ³
	Consumers	Inhalation	Acute local effects	1,93 mg/m ³
Dimethyl phthalate	Consumers	Ingestion	Long-term systemic effects	25 mg/kg
	Consumers	Inhalation	Long-term systemic effects	86,96 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	60 mg/kg
	Workers	Inhalation	Long-term systemic effects	293,86 mg/m ³
	Workers	Skin contact	Long-term systemic effects	100 mg/kg
Cumyl hydroperoxide	Workers	Inhalation	Long-term systemic effects	6 mg/m ³
Cumene	Workers	Inhalation	Long-term systemic effects	100 mg/m ³
	Workers	Inhalation	Acute local effects	250 mg/m ³
	Workers	Dermal	Long-term systemic effects	15,4 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	16,6 mg/m ³
	Consumers	Dermal	Long-term systemic effects	1,2 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	5 mg/kg bw/day
Dicumyl peroxide	Workers	Inhalation	Long-term systemic effects	5,6 mg/m ³
	Workers	Dermal	Long-term systemic effects	0,8 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1,4 mg/m ³
	Consumers	Dermal	Long-term systemic effects	0,4 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	0,4 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
Methyl benzoate	Fresh water	0,023 mg/l
	Marine water	0,0023 mg/l
	Intermittent water	0,23 mg/l
	Sewage treatment plant	8,15 mg/l
	Fresh water sediment	0,492 mg/kg dry

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		weight
	Marine sediment	0,0492 mg/kg dry weight
	Soil	0,085 mg/kg dry weight
Diisononyl phthalate	Soil	30 mg/kg dry weight
Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane	Fresh water	0,0056 mg/l
	Intermittent water	0,056 mg/l
	Marine water	0,00056 mg/l
	Fresh water sediment	0,019 mg/kg dry weight
	Marine sediment	0,0019 mg/kg dry weight
	Sewage treatment plant	1,2 mg/l
	Soil	0,00231 mg/kg dry weight
Hydrogen peroxide solution	Fresh water	0,0126 mg/l
	Marine water	0,0126 mg/l
	Soil	0,0023 mg/kg
	Sewage treatment plant	4,66 mg/l
	Fresh water sediment	0,047 mg/kg
	Marine sediment	0,047 mg/kg
	Intermittent water	0,0138 mg/l
Dimethyl phthalate	Fresh water	0,192 mg/l
	Marine water	0,0192 mg/l
	Intermittent water	0,39 mg/l
	Sewage treatment plant	4 mg/l
	Fresh water sediment	1,403 mg/kg dry weight
	Soil	3,16 mg/kg dry weight
Cumyl hydroperoxide	Fresh water	0,0031 mg/l
	Marine water	0,00031 mg/l
	Intermittent water	0,031 mg/l
	Sewage treatment plant	0,35 mg/l
	Fresh water sediment	0,023 mg/kg
	Marine sediment	0,0023 mg/kg
	Soil	0,0029 mg/kg
Cumene	Fresh water	0,035 mg/l
	Intermittent water	0,012 mg/l
	Marine water	0,004 mg/l

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	Sewage treatment plant	200 mg/l
	Fresh water sediment	3,22 mg/kg dry weight
	Marine sediment	0,322 mg/kg dry weight
	Soil	0,624 mg/kg dry weight
Dicumyl peroxide	Fresh water	0,00234 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	2,24 mg/kg dry weight
	Soil	0,447 mg/kg dry weight

8.2 Exposure controls

Engineering measures

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

Personal protective equipment

Eye/face protection : Tightly fitting safety goggles
Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : Neoprene
Material : Nitrile rubber

Skin and body protection : Protective suit

Respiratory protection : In the case of vapour or aerosol formation use a respirator with an approved filter.
Filter A

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid

Colour : red

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Odour	:	Faint.
Odour Threshold	:	No data available
Melting point	:	No data available
Boiling point/boiling range	:	Decomposes below the boiling point.
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	Not applicable
		Above the SADT value
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)	:	60 °C
pH	:	substance/mixture not stable

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Viscosity
Viscosity, dynamic : 23 mPa.s (20 °C)

Viscosity, kinematic : No data available

Solubility(ies)
Water solubility : (20 °C)
partly miscible

Solubility in other solvents : No data available

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

Vapour pressure : not determined

Relative density : 1,13 (20 °C)

Bulk density : Not applicable

Relative vapour density : No data available

9.2 Other information

Explosives : Not explosive

Oxidizing properties : Not classified as oxidising.

Flammability (liquids) : Decomposition products may be flammable.

Evaporation rate : No data available

Active Oxygen Content : 8,8 - 9,0 %

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Organic peroxides : 45 %

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : Confinement must be avoided.
Heat, flames and sparks.

10.5 Incompatible materials

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.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.
Hazardous decomposition products : Carbon oxides
Formic acid
Organic acid
Fatty acid
Methyl ethyl ketone
Acetophenone
Methane

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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.

Self-Accelerating decomposition temperature (SADT) : 60 °C

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Harmful if swallowed, in contact with skin or if inhaled.

Product:

Acute oral toxicity : LD50 (Rat): 763 mg/kg
Remarks: The value is calculated

Acute inhalation toxicity : LC50 (Rat): 1,07 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Remarks: The value is calculated

Acute dermal toxicity : LD50: 1.993 mg/kg
Remarks: The value is calculated

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Acute oral toxicity : LD50 (Rat, male): 1.017 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male and female): 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

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GLP: no

Acute dermal toxicity : LD50 (Rabbit, male and female): 4.000 mg/kg
Method: OECD Test Guideline 402

Cumyl hydroperoxide:

Acute oral toxicity : LD50 Oral (Rat, male): 382 mg/kg

Acute toxicity estimate: 382 mg/kg
Method: Calculation method

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 (Rat): 1.200 - 1.520 mg/kg

LD50 (Rabbit): 134 mg/kg

Acute toxicity estimate: 1.200 mg/kg
Method: Calculation method

Methyl benzoate:

Acute oral toxicity : LD50 (Rat): 1.177 mg/kg

Acute toxicity estimate: 1.177 mg/kg
Method: Calculation method

2-Phenylisopropanol:

Acute oral toxicity : LD50 (Rat): 1.300 mg/kg
Remarks: Information taken from reference works and the literature.

Acute toxicity estimate: 1.300 mg/kg
Method: Calculation method

Hydrogen peroxide solution:

Acute oral toxicity : LD50 (Rat): 431 mg/kg
Method: OECD Test Guideline 401
Remarks: Information taken from reference works and the literature.

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Acute inhalation toxicity : LC50: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Acute dermal toxicity : LD50 Dermal (Rabbit, male): > 5.000 mg/kg
Remarks: Information taken from reference works and the literature.

Cumene:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg

Dicumyl peroxide:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 401
Assessment: The substance or mixture has no acute oral toxicity

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

Diisononyl phthalate:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Skin corrosion/irritation

Causes severe burns.

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Result : Causes burns.

Cumyl hydroperoxide:

Species : Rabbit
Assessment : Category 1B

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Result : Causes burns.

Methyl benzoate:

Species : Rat
Result : No skin irritation

2-Phenylisopropanol:

Assessment : Irritating to skin.
Remarks : Information taken from reference works and the literature.

Hydrogen peroxide solution:

Result : Causes severe burns.

Dicumyl peroxide:

Assessment : Irritating to skin.
Remarks : Irritating to skin.

Diisononyl phthalate:

Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Result : Risk of serious damage to eyes.

Cumyl hydroperoxide:

Assessment : Causes severe skin burns and eye damage.

Methyl benzoate:

Species : Rabbit
Result : No eye irritation

2-Phenylisopropanol:

Assessment : Irritating to eyes.
Remarks : Information taken from reference works and the literature.

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Hydrogen peroxide solution:

Assessment : Causes severe burns.

Dicumyl peroxide:

Assessment : Mild eye irritation
Remarks : Causes eye irritation.

Diisononyl phthalate:

Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Assessment : Does not cause skin sensitisation.

Cumyl hydroperoxide:

Result : Not sensitizing.

Dicumyl peroxide:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Method : OECD Test Guideline 429
Result : Not a skin sensitizer.

Germ cell mutagenicity

Not classified based on available information.

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

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Genotoxicity in vivo : Remarks: Not classified due to data which are conclusive although insufficient for classification.

Cumyl hydroperoxide:

Genotoxicity in vitro : Result: Evidence of genotoxic effects in vitro.

Genotoxicity in vivo : Result: No evidence of genotoxic effects in vivo.

Germ cell mutagenicity-
Assessment : Not mutagenic.

Hydrogen peroxide solution:

Genotoxicity in vivo : Species: Mouse (male and female)
Application Route: Intraperitoneal
Method: Mutagenicity (micronucleus test)
Result: negative
GLP: yes
Remarks: Information taken from reference works and the literature.

Cumene:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: unscheduled DNA synthesis assay
Test system: rat hepatocytes
Metabolic activation: no
Method: OECD Test Guideline 482
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: In vitro gene mutation study in mammalian cells
Test system: Chinese hamster ovary cells

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Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative
GLP: yes

Test Type: Micronucleus test
Species: Rat (male)
Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: Ambiguous results
GLP: yes

Dicumyl peroxide:
Genotoxicity in vitro : Test Type: reverse mutation assay
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro cytogenicity study in mammalian cells
Test system: Chinese hamster lung cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative

Carcinogenicity

May cause cancer.

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Remarks : No data available

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Cumyl hydroperoxide:

Remarks : No data available

Cumene:

Species : Rat, male and female
Application Route : inhalation (vapour)
Activity duration : 6 hrs
Result : carcinogenic effects
Symptoms : adenocarcinoma, kidney tumors

Species : Mouse, male and female
Application Route : inhalation (vapour)
Activity duration : 6 hrs
Result : carcinogenic effects
Symptoms : adenocarcinoma

Carcinogenicity - Assessment : Sufficient evidence of carcinogenicity in animal experiments

Reproductive toxicity

Not classified based on available information.

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Dose: 0 25, 50, 75 milligram per kilogram
General Toxicity - Parent: NOAEL: 50 mg/kg bw/day
General Toxicity F1: NOAEL F1: 50 mg/kg bw/day
Fertility: NOAEL Parent: 75 mg/kg bw/day
Method: OECD Test Guideline 421
GLP: yes

Cumene:

Effects on fertility : Species: Rat, male
Application Route: inhalation (vapour)
General Toxicity - Parent: NOAEL: >= 1.200 ppm
GLP: yes

Effects on foetal : Species: Rat, male and female

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development

Application Route: inhalation (vapour)
General Toxicity Maternal: NOAEL: 100 ppm
Developmental Toxicity: NOAEL: > 1.200 ppm
Method: OECD Test Guideline 414
GLP: yes

Species: Rabbit, male and female
Application Route: inhalation (vapour)
General Toxicity Maternal: LOAEL: 500 ppm
Developmental Toxicity: NOAEL: 2.300 ppm
Method: OECD Test Guideline 414
GLP: yes

Dicumyl peroxide:

Effects on foetal
development

: Species: Rat
General Toxicity Maternal: NOAEL: 150 mg/kg bw/day
Developmental Toxicity: NOAEL: 150 mg/kg bw/day
Method: OECD Test Guideline 414
Remarks: Adverse developmental effects were observed

Species: Rabbit
General Toxicity Maternal: NOAEL: 50 mg/kg bw/day
Developmental Toxicity: NOAEL: 150 mg/kg bw/day
Method: OECD Test Guideline 414
Remarks: No significant adverse effects were reported

Reproductive toxicity -
Assessment

: Clear evidence of adverse effects on development, based on
animal experiments.

STOT - single exposure

May cause respiratory irritation.

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Remarks : Not classified due to data which are conclusive although
insufficient for classification.

Cumene:

Exposure routes : Inhalation
Assessment : May cause respiratory irritation.

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Dicumyl peroxide:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Cumyl hydroperoxide:

Exposure routes : Inhalation
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Dicumyl peroxide:

Remarks : Not classified due to data which are conclusive although insufficient for classification.

Repeated dose toxicity

Components:

Dicumyl peroxide:

Species : Rat
NOAEL : 80 mg/kg bw/day
Method : OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

Components:

Methyl ethyl ketone peroxide;Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

No aspiration toxicity classification

Methyl benzoate:

No aspiration toxicity classification

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Cumene:

May be fatal if swallowed and enters airways.

Diisononyl phthalate:

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : No further data available.

Components:

Cumyl hydroperoxide:

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

Hydrogen peroxide solution:

Remarks : No further data available.

Cumene:

Remarks : Solvents may degrease the skin.

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SECTION 12: Ecological information

12.1 Toxicity

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

- | | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Poecilia reticulata (guppy)): 44,2 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

NOEC (Poecilia reticulata (guppy)): 18 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 39 mg/l
Exposure time: 48 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes

NOEC (Daphnia magna (Water flea)): 26,7 mg/l
Exposure time: 24 h
Test Type: Immobilization
Method: OECD Test Guideline 202
GLP: yes |
| Toxicity to algae/aquatic plants | : | ErC50 (Pseudokirchneriella subcapitata (algae)): 5,6 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201
GLP: yes

NOEC (Pseudokirchneriella subcapitata (algae)): 2,1 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
Method: OECD Test Guideline 201
GLP: yes |
| Toxicity to microorganisms | : | EC50 (activated sludge): 48 mg/l |

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Exposure time: 0,5 h
Test Type: Respiration inhibition
Method: Domestic OECD Guideline 209
GLP: yes

EC10 (activated sludge): 12 mg/l
Exposure time: 0,5 h
Test Type: Respiration inhibition
Method: Domestic OECD Guideline 209
GLP: yes

Cumyl hydroperoxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 3,9 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia (water flea)): 9,15 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

EC50 (Daphnia (water flea)): 18,84 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 3,1 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Desmodesmus subspicatus (green algae)): 1,0 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

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Toxicity to microorganisms : Toxicity Threshold (EC3) (*Pseudomonas putida*): > 50 mg/l
Exposure time: 16 h
Test Type: Growth inhibition

Methyl benzoate:

Toxicity to fish : LC50 (*Danio rerio* (zebra fish)): 23 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 32,1 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.

2-Phenylisopropanol:

Toxicity to fish : LC50 (Fish): Remarks: No data available

Hydrogen peroxide solution:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 16,4 mg/l
Exposure time: 96 h
Test Type: semi-static test
Remarks: Information taken from reference works and the literature.

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Daphnia pulex* (Water flea)): 2,4 mg/l
Exposure time: 48 h
Test Type: semi-static test
Remarks: Information taken from reference works and the literature.

Toxicity to algae/aquatic plants : ErC50 (*Skeletonema costatum* (marine diatom)): 1,38 mg/l
Exposure time: 72 h
Test Type: static test
Remarks: Information taken from reference works and the literature.

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

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Cumene:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4,8 mg/l
Exposure time: 96 h
Test Type: flow-through test
- LC50 (Cyprinodon variegatus (sheepshead minnow)): 4,7 mg/l
Exposure time: 96 h
Test Type: flow-through test
- NOEC (Fish): 0,38 mg/l
Exposure time: 28 d
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,14 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes
- EC50 (Mysidopsis bahia (opossum shrimp)): 1,2 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes
- Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 2,01 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
- NOEC (Desmodesmus subspicatus (green algae)): 1,49 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
- Toxicity to microorganisms : EC50 (activated sludge): > 2.000 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes
- Toxicity to daphnia and other : NOEC: 0,35 mg/l

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aquatic invertebrates
(Chronic toxicity)

Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
Test Type: static test
Method: OECD Test Guideline 211
GLP: yes

Dicumyl peroxide:

Toxicity to fish : LC50 (*Oryzias latipes* (Japanese medaka)): 0,469 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other
aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 0,397 mg/l
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
GLP: yes
Remarks: No toxicity at the limit of solubility

Toxicity to algae/aquatic
plants : (*Pseudokirchneriella subcapitata* (green algae)): Exposure
time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
Remarks: No toxicity at the limit of solubility

Toxicity to microorganisms : NOEC (activated sludge): > 1.000 mg/l
Exposure time: 0,5 h
Test Type: static test
Method: OECD Test Guideline 209
GLP: yes

Toxicity to daphnia and other
aquatic invertebrates
(Chronic toxicity) : NOEC: 0,117 mg/l
End point: reproduction rate
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)
Test Type: semi-static test
Method: OECD Test Guideline 211
GLP: yes

Diisononyl phthalate:

Toxicity to daphnia and other
aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 500 mg/l
Exposure time: 48 h

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Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 88 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
		NOEC (Desmodesmus subspicatus (green algae)): > 88 mg/l Exposure time: 72 h Test Type: Growth inhibition Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
Toxicity to fish (Chronic toxicity)	:	NOEC: 18,5 - 24,5 mg/kg food Exposure time: 284 d Species: Oryzias latipes (Orange-red killifish) Test Type: flow-through test Method: OECD Test Guideline 210

12.2 Persistence and degradability

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Biodegradability : Result: Readily biodegradable.
Method: Closed Bottle test

Cumyl hydroperoxide:

Biodegradability : Result: Not readily biodegradable.

Hydrogen peroxide solution:

Biochemical Oxygen Demand (BOD) : Remarks: No data available

Cumene:

Biodegradability : Test Type: anaerobic
Inoculum: activated sludge, non-adapted
Result: Not biodegradable

Test Type: aerobic
Inoculum: Domestic sewage, non-adapted
Result: Readily biodegradable.

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Dicumyl peroxide:

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

Diisononyl phthalate:

Biodegradability : Result: Readily biodegradable.

12.3 Bioaccumulative potential

Components:

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane:

Bioaccumulation : Bioconcentration factor (BCF): 10,3
Remarks: Not expected considering the low log Pow value.

Partition coefficient: n-octanol/water : log Pow: < 2,04 (25 °C)
Method: OECD Test Guideline 117

Cumyl hydroperoxide:

Bioaccumulation : Bioconcentration factor (BCF): < 1

Partition coefficient: n-octanol/water : Pow: 39,8 (20 °C)

Hydrogen peroxide solution:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Dicumyl peroxide:

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

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12.4 Mobility in soil

Components:

Hydrogen peroxide solution:

Mobility : Remarks: Can be leached out from soil.

Distribution among environmental compartments : Remarks: Transport to air is not expected.

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.

Components:

Cumyl hydroperoxide:

Assessment : Not classified as PBT or vPvB

Hydrogen peroxide solution:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Cumene:

Assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic). This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

Dicumyl peroxide:

Assessment : Not classified as PBT or vPvB

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components

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considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

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

Components:

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.

Hydrogen peroxide solution:

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

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.

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 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.

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Due to the high risk of contamination recycling/recovery is not recommended.
Follow all warnings even after the container is emptied.

SECTION 14: Transport information

14.1 UN number or ID number

ADN	:	UN 3105
ADR	:	UN 3105
RID	:	UN 3105
IMDG	:	UN 3105
IATA	:	UN 3105

14.2 UN proper shipping name

ADN	:	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl ethyl ketone peroxide, Cumyl hydroperoxide)
ADR	:	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl ethyl ketone peroxide, Cumyl hydroperoxide)
RID	:	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl ethyl ketone peroxide, Cumyl hydroperoxide)
IMDG	:	ORGANIC PEROXIDE TYPE D, LIQUID (Methyl ethyl ketone peroxide, Cumyl hydroperoxide)
IATA	:	Organic peroxide type D, liquid (Methyl ethyl ketone peroxide, Cumyl hydroperoxide)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	:	5.2
ADR	:	5.2
RID	:	5.2
IMDG	:	5.2
IATA	:	5.2 HEAT

14.4 Packing group

ADN		
Packing group	:	Not assigned by regulation

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Classification Code : P1
Labels : 5.2

ADR

Packing group : Not assigned by regulation
Classification Code : P1
Labels : 5.2
Tunnel restriction code : (D)

RID

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

IMDG

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

IATA (Cargo)

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

IATA (Passenger)

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

14.5 Environmental hazards

ADN

Environmentally hazardous : no

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

- | | | |
|--|---|---|
| REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) | : | Conditions of restriction for the following entries should be considered:
Number on list 75, 3

If you intend to use this product as tattoo ink, please contact your vendor.

Diisononyl phthalate (Number on list 52)
Dicumyl peroxide (Number on list 30) |
| 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 (EU) 2019/1021 on persistent organic pollutants (recast) | : | Not applicable |
| Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals | : | Not applicable |
| REACH - List of substances subject to authorisation (Annex XIV) | : | Not applicable |
| Regulation (EU) 2019/1148 on the marketing and use of explosives precursors | : | |

This product is regulated by Regulation (EU) 2019/1148: all suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point. Hydrogen peroxide solution (ANNEX I)

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Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	P6b	SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES
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Other regulations:

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

Regulation of the European Parliament and Council Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
Regulation of the European Parliament and Council Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures (CLP)
Regulation of the European Parliament and Council Regulation (EC) No 286/2011 amending, for the purposes of its adaptation to technical progress, Regulation of the European Parliament and Council Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures (CLP)
Act No. 350/2011 Sb. on chemical substances and chemical mixtures, as amended
Act No. 258/2000 Sb. the protection of public health, as amended
Act No. 262/2006 Sb. The Labour Code, as amended
Law No. 201/2012 Sb. On air protection, as amended
Act No. 254/2001 Sb. Water, as amended
Government Regulation No. 361/2007 Sb. Laying down the conditions of health of workers at work, as amended
Act No. 541/2020 on waste

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

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	All components are listed on the inventory, regulatory obligations/restrictions apply
DSL	:	This product contains one or several components that are not on the Canadian DSL nor NDSL. Kayaset red
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory

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KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

15.2 Chemical safety assessment

Methyl ethyl ketone peroxide; Reaction mass of butane-2,2-diyl dihydroperoxide and di-sec-butylhexaoxidane	:	A Chemical Safety Assessment has been carried out for this substance.
Cumyl hydroperoxide	:	A Chemical Safety Assessment has been carried out for this substance.
2-Phenylisopropanol	:	A Chemical Safety Assessment is not required for this substance.
Hydrogen peroxide solution	:	A Chemical Safety Assessment has been carried out for this substance.
Cumene	:	No information available.
Dicumyl peroxide	:	A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H240	:	Heating may cause an explosion.
H242	:	Heating may cause a fire.
H271	:	May cause fire or explosion; strong oxidizer.
H302	:	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.

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H319	: Causes serious eye irritation.
H331	: Toxic if inhaled.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H350	: May cause cancer.
H360D	: May damage the unborn child.
H373	: May cause damage to organs through prolonged or repeated exposure.
H411	: Toxic to aquatic life with long lasting effects.
H412	: Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Asp. Tox.	: Aspiration hazard
Carc.	: Carcinogenicity
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Org. Perox.	: Organic peroxides
Ox. Liq.	: Oxidizing liquids
Repr.	: Reproductive toxicity
Skin Corr.	: Skin corrosion
Skin Irrit.	: Skin irritation
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure
2000/39/EC	: Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2006/15/EC	: Europe. Indicative occupational exposure limit values
2017/164/EU	: Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
2019/1831/EU	: Europe. Commission Directive 2019/1831/EU establishing a fifth list of indicative occupational exposure limit values
CZ OEL	: Czech Republic. Chemical agents at work - Appendix 2: Occupational exposure limits
2000/39/EC / TWA	: Limit Value - eight hours
2000/39/EC / STEL	: Short term exposure limit
2006/15/EC / TWA	: Limit Value - eight hours
2017/164/EU / STEL	: Short term exposure limit
2017/164/EU / TWA	: Limit Value - eight hours
2019/1831/EU / TWA	: Limit Value - eight hours
2019/1831/EU / STEL	: Short term exposure limit
CZ OEL / TWA	: Time weighted average
CZ OEL / STEL	: Maximum permissible concentration

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ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information : This data sheet contains changes from the previous version in section(s):
Hazards identification
Composition/information on ingredients
Toxicological information

Classification of the mixture:

Org. Perox. D	H242
Acute Tox. 4	H302
Acute Tox. 4	H332

Classification procedure:

Based on product data or assessment
Based on product data or assessment
Based on product data or assessment

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Acute Tox. 4	H312	Based on product data or assessment
Skin Corr. 1B	H314	Calculation method
Eye Dam. 1	H318	Calculation method
Carc. 1B	H350	Calculation method
STOT SE 3	H335	Calculation method
STOT RE 2	H373	Calculation method
Aquatic Chronic 3	H412	Calculation method

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