

SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519



NOROX[®]MCP-99

Version	Revision Date:	SDS Number:	Date of last issue: 2018/10/02
2.0	2020/07/23	600000000367	Date of first issue: 2018/10/02

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : NOROX[®]MCP-99

Chemical nature : Organic Peroxide
Liquid mixture

Manufacturer or supplier's details

Company : United Initiators (Shanghai) Co. Ltd.

Address : Room 201, No. 2398 Hutai Road
200436 Baoshan District Shanghai

Telephone : +86 21 61172758

Emergency telephone number : +86 21 61172758

E-mail address : contact@degussa-aj.com

Recommended use of the chemical and restrictions on use

Recommended use : Hardener

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	: liquid
Colour	: light yellow, clear
Odour	: aromatic

Combustible liquid. Heating may cause a fire. Harmful if swallowed or if inhaled. May be harmful in contact with skin. Causes severe skin burns and eye damage. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

GHS Classification

Flammable liquids : Category 4

Organic peroxides : Type D

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 5

Skin corrosion/irritation : Category 1B

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Serious eye damage/eye irritation : Category 1

Specific target organ toxicity - repeated exposure : Category 2

Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 3

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H227 Combustible liquid.
H242 Heating may cause a fire.
H302 + H332 Harmful if swallowed or if inhaled.
H313 May be harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.
H401 Toxic to aquatic life.
H412 Harmful 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/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials.
P234 Keep only in original container.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ 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 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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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.

P312 Call a POISON CENTER/doctor if you feel unwell.

P363 Wash contaminated clothing before reuse.

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

Storage:

P405 Store locked up.

P410 Protect from sunlight.

P411 + P235 Store at temperatures not exceeding < 30 °C/ < 86 °F. Keep cool.

P420 Store away from other materials.

Disposal:

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

Physical and chemical hazards

Combustible liquid. Heating may cause a fire.

Health hazards

Harmful if swallowed. Harmful if inhaled. May be harmful in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.

Environmental hazards

Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
dimethyl phthalate	131-11-3	>= 40 -< 45
2-Butanone, peroxide	1338-23-4	>= 25 -< 30
Cumene hydroperoxide	80-15-9	>= 20 -< 25
Cumene	98-82-8	>= 2.5 -< 5
Hydrogen peroxide	7722-84-1	>= 1 -< 2.5
Benzenemethanol, alpha,alpha-dimethyl-	617-94-7	>= 1 -< 5

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4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
Symptoms of poisoning may appear several hours later.
Call a physician immediately.
- If inhaled : Call a physician or poison control centre immediately.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
Call a physician immediately.
If breathed in, move person into fresh air.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash contaminated clothing before re-use.
If on skin, rinse well with water.
If on clothes, remove clothes.
If symptoms persist, call a physician.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Call a physician immediately.
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Harmful if swallowed or if inhaled.
May be harmful in contact with skin.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.
Causes severe burns.
- Protection of first-aiders : First Aid responders should pay attention to self-protection and use the recommended protective clothing
- Notes to physician : Treat symptomatically and supportively.

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5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray jet
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite.
The product burns violently.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
The product will float on water and can be reignited on surface water.
Cool closed containers exposed to fire with water spray.
- Specific extinguishing methods : 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.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Do not use a solid water stream as it may scatter and spread fire.
Remove undamaged containers from fire area if it is safe to do so.
Use water spray to cool unopened containers.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
Use personal protective equipment.
-

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Remove all sources of ignition.
Follow safe handling advice and personal protective equipment recommendations.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
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- Methods and materials for containment and cleaning up : Contact with incompatible substances can cause decomposition at or below SADT.
Clear spills immediately.
Suppress (knock down) gases/vapours/mists with a water spray jet.
To clean the floor and all objects contaminated by this material, use plenty of water.
Soak up with inert absorbent material.
Isolate waste and do not reuse.
Non-sparking tools should be used.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
- Prevention of secondary hazards : Never return spills in original containers for re-use.
Treat recovered material as described in the section "Disposal considerations".
-

7. HANDLING AND STORAGE

Handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Advice on protection against fire and explosion : Keep away from heat and sources of ignition.
Use only explosion-proof equipment.
Keep away from combustible material.
- Advice on safe handling : Do not swallow.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Avoid formation of aerosol.
Take precautionary measures against static discharges.
Never return any product to the container from which it was originally removed.
Provide sufficient air exchange and/or exhaust in work rooms.
Avoid confinement.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Smoking, eating and drinking should be prohibited in the application area.
Wash thoroughly after handling.
For personal protection see section 8.
Protect from contamination.
- Avoidance of contact : Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

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Storage

Conditions for safe storage : Avoid impurities (e.g. rust, dust, ash), risk of decomposition. Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Store in accordance with the particular national regulations.

Materials to avoid : Keep away from strong acids, bases, heavy metal salts and other reducing substances.

Recommended storage temperature : < 30 °C

Further information on storage stability : No decomposition if stored normally.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dimethyl phthalate	131-11-3	TWA	5 mg/m ³	ACGIH
2-Butanone, peroxide	1338-23-4	C	0.2 ppm	ACGIH
Cumene	98-82-8	TWA	50 ppm	ACGIH
Hydrogen peroxide	7722-84-1	PC-TWA	1.5 mg/m ³	GBZ 2.1-2007
		TWA	1 ppm	ACGIH

Engineering measures : Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Filter type : ABEK-filter

Eye/face protection : Tightly fitting safety goggles
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure

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Hand protection

Material	:	Nitrile rubber
Break through time	:	< 30 min
Glove thickness	:	0.4 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Hygiene measures : Keep away from food and drink.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	light yellow, clear
Odour	:	aromatic
pH	:	No data available
Melting point/range	:	No data available
Boiling point/boiling range	:	Decomposition: Decomposes below the boiling point.
Flash point	:	> 65 °C
		Method: ISO 3679
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available

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Vapour pressure	:	No data available
Density	:	ca. 1.1 g/cm ³ (20 °C)
Solubility(ies)	:	
Water solubility	:	slightly soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	60 °C Method: UN-Test H.4 SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.
Viscosity	:	
Viscosity, dynamic	:	17 - 21 mPa.s
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Organic peroxide

10. STABILITY AND REACTIVITY

Reactivity	:	Stable under recommended storage conditions.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Vapours may form explosive mixture with air.
Conditions to avoid	:	Protect from contamination. Contact with incompatible substances can cause decomposition at or below SADT. Heat, flames and sparks. Avoid confinement.
Incompatible materials	:	Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents
Hazardous decomposition products	:	Irritant, caustic, flammable, noxious/toxic gases and vapours can develop in the case of fire and decomposition

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11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or if inhaled.
May be harmful in contact with skin.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 895.51 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 1.64 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: 3,402 mg/kg Method: Calculation method

Components:

dimethyl phthalate:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	(Rat): > 10.4 mg/l Exposure time: 6 h Test atmosphere: vapour Remarks: No mortality observed at this dose.
Acute dermal toxicity	:	LD50 (Rabbit): > 12,000 mg/kg

2-Butanone, peroxide:

Acute oral toxicity	:	Acute toxicity estimate: 500 mg/kg Method: Expert judgement
Acute inhalation toxicity	:	Acute toxicity estimate: 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgement Assessment: The component/mixture is moderately toxic after short term inhalation. Remarks: Based on data from similar materials
Acute dermal toxicity	:	Acute toxicity estimate: 2,500 mg/kg Method: Expert judgement

Cumene hydroperoxide:

Acute oral toxicity	:	LD50 Oral (Rat): 382 mg/kg
Acute inhalation toxicity	:	Acute toxicity estimate: 2.01 mg/l

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Exposure time: 4 h
Test atmosphere: vapour
Method: Expert judgement
Assessment: The component/mixture is toxic after short term inhalation.

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg
Method: Converted acute toxicity point estimate
Assessment: The component/mixture is moderately toxic after single contact with skin.

Cumene:

Acute oral toxicity : LD50 (Rat): 2,700 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: No mortality observed at this dose.

Hydrogen peroxide:

Acute oral toxicity : LD50 (Rat, male): 1,026 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 0.17 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The component/mixture is moderately toxic after short term inhalation.
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Acute dermal toxicity : LD50 (Rabbit): > 6,500 mg/kg

Benzenemethanol, alpha,alpha-dimethyl-:

Acute oral toxicity : LD50: Method: Expert judgement
Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50: Method: Expert judgement
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Causes severe burns.

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Product:

Remarks : Extremely corrosive and destructive to tissue.

Components:

dimethyl phthalate:

Species : Rabbit
Method : Draize Test
Result : No skin irritation

2-Butanone, peroxide:

Species : Rabbit
Result : Causes burns.

Cumene hydroperoxide:

Species : Rabbit
Result : Causes burns.

Remarks : Extremely corrosive and destructive to tissue.

Cumene:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Hydrogen peroxide:

Result : Corrosive after 3 minutes or less of exposure

Benzenemethanol, alpha,alpha-dimethyl-:

Species : Rabbit
Result : Severe skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks : May cause irreversible eye damage.

Components:

dimethyl phthalate:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

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2-Butanone, peroxide:

Result : Irreversible effects on the eye

Cumene hydroperoxide:

Species : Rabbit
Result : Corrosive

Remarks : May cause irreversible eye damage.

Cumene:

Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

Hydrogen peroxide:

Result : Irreversible effects on the eye

Benzenemethanol, alpha,alpha-dimethyl-:

Result : Irritating to eyes.

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

dimethyl phthalate:

Species : Mouse
Method : OECD Test Guideline 429
Result : Does not cause skin sensitisation.

2-Butanone, peroxide:

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

Assessment : Harmful if swallowed., Harmful if inhaled.

Cumene hydroperoxide:

Result : Does not cause skin sensitisation.

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Cumene:

Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:

dimethyl phthalate:

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

Method: OECD Test Guideline 473
Result: negative

Method: OECD Test Guideline 476
Result: positive

Genotoxicity in vivo : Test Type: Chromosomal aberration
Species: Rat
Application Route: Intraperitoneal
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

2-Butanone, peroxide:

Genotoxicity in vitro : Method: OECD Test Guideline 473
Result: negative

Method: OECD Test Guideline 471
Result: negative

Method: OECD Test Guideline 476
Result: negative

Cumene hydroperoxide:

Genotoxicity in vitro : Result: positive
Remarks: In vitro tests have shown mutagenic effects.

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Application Route: Skin contact
Result: negative

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Cumene:

Genotoxicity in vitro : Method: OECD Test Guideline 473
Result: negative

Method: OECD Test Guideline 471
Result: negative

Method: OECD Test Guideline 476
Result: negative

Method: OECD Test Guideline 482
Result: negative

Test Type: Ames test
Result: positive

Genotoxicity in vivo : Species: Rat
Application Route: Intraperitoneal
Exposure time: 72 h
Method: OECD Test Guideline 474
Result: Equivocal

Species: Mouse
Application Route: inhalation (gas)
Exposure time: 14 w
Method: OECD Test Guideline 474
Result: negative

Hydrogen peroxide:

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

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo
cytogenetic assay)
Species: Mouse
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

dimethyl phthalate:

Species : Rat
Application Route : Skin contact
Method : OECD Test Guideline 451
Result : negative
Remarks : Based on data from similar materials

2-Butanone, peroxide:

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Remarks : This information is not available.

Cumene hydroperoxide:

Remarks : This information is not available.

Cumene:

Species : Rat
Application Route : inhalation (gas)
Exposure time : 2 Years
LOEC : 250
Method : OECD Test Guideline 451
Result : negative

Species : Mouse
Application Route : inhalation (gas)
Exposure time : 2 Years
LOEC : 125
Method : OECD Test Guideline 451
Result : negative

Hydrogen peroxide:

Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

Reproductive toxicity

Not classified based on available information.

Components:

dimethyl phthalate:

Effects on fertility : Species: Rat
Application Route: oral (gavage)
Method: OECD Test Guideline 440
Result: negative

Effects on foetal development : Species: Rat
Application Route: Ingestion
General Toxicity Maternal: NOAEL: 840 mg/kg body weight
Developmental Toxicity: NOAEL: 3,570 mg/kg body weight
Method: OECD Test Guideline 414

2-Butanone, peroxide:

Effects on fertility : Species: Rat
Application Route: oral (gavage)
General Toxicity - Parent: NOAEL: 50 mg/kg body weight
Method: OECD Test Guideline 421
Result: negative

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Cumene hydroperoxide:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Cumene:

Effects on foetal development : Species: Rabbit
Application Route: inhalation (vapour)
General Toxicity Maternal: LOAEL: 500
Developmental Toxicity: NOAEL: 2,300
Method: OECD Test Guideline 414

STOT - single exposure

Not classified based on available information.

Components:

Cumene:

Assessment : May cause respiratory irritation.

Hydrogen peroxide:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

Cumene hydroperoxide:

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

Repeated dose toxicity

Components:

dimethyl phthalate:

Species : Rat
NOAEL : 770 mg/kg
Application Route : Oral
Exposure time : 16 w
Method : OECD Test Guideline 408

2-Butanone, peroxide:

Species : Rat
NOAEL : 200 mg/kg
Application Route : oral (gavage)

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Exposure time : 28 d
Method : OECD Test Guideline 407

Repeated dose toxicity - Assessment : Harmful if swallowed., Harmful if inhaled.

Cumene hydroperoxide:

Species : Rat
NOAEL : 0.031 mg/l
Application Route : inhalation (dust/mist/fume)
Exposure time : 90 d

Cumene:

Species : Rat
NOAEL : 154 mg/kg
Application Route : Oral
Method : OECD Test Guideline 413

Hydrogen peroxide:

Species : Mouse
Application Route : Ingestion
Exposure time : 90 d
Symptoms : No adverse effects

Aspiration toxicity

Not classified based on available information.

Components:

dimethyl phthalate:

No aspiration toxicity classification

Cumene:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks : No data available

Components:

dimethyl phthalate:

Remarks : No data available

Cumene hydroperoxide:

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Remarks : Solvents may degrease the skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

dimethyl phthalate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 39 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 52 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 260 mg/l
Exposure time: 72 h

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 11 mg/l
Exposure time: 102 d
Method: OECD Test Guideline 210

LOEC (Oncorhynchus mykiss (rainbow trout)): 24 mg/l
Exposure time: 102 d
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 9.6 mg/l
Exposure time: 21 d

LOEC (Daphnia magna (Water flea)): 23 mg/l
Exposure time: 21 d

Toxicity to microorganisms : EC50: 4,100 mg/l
Exposure time: 0.5 h
Method: OECD Test Guideline 209

2-Butanone, peroxide:

Toxicity to fish : LC50 (Poecilia reticulata (guppy)): 44.2 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

NOEC (Poecilia reticulata (guppy)): 18 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 39 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

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NOEC (Daphnia magna (Water flea)): 26.7 mg/l
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 5.6 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 2.1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (Bacteria): 48 mg/l
Exposure time: 0.5 h
Method: OECD Test Guideline 209

Cumene hydroperoxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 3.9 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 18 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 1.6 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Cumene:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.8 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.14 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 2.01 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.35 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50: > 2,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Ecotoxicology Assessment

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

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Hydrogen peroxide:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 16.4 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : LC50 (Daphnia pulex (Water flea)): 2.4 mg/l
aquatic invertebrates Exposure time: 48 h

Toxicity to algae/aquatic : EC50 (Skeletonema costatum (marine diatom)): 1.38 mg/l
plants Exposure time: 72 h

NOEC (Skeletonema costatum (marine diatom)): 0.63 mg/l
Exposure time: 72 h

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 0.63 mg/l
aquatic invertebrates (Chronic toxicity) Exposure time: 21 d

Benzenemethanol, alpha,alpha-dimethyl-:

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Persistence and degradability

Components:

dimethyl phthalate:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301E

2-Butanone, peroxide:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301D

Cumene hydroperoxide:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301B

Cumene:

Biodegradability : Result: Readily biodegradable.

Hydrogen peroxide:

Biodegradability : Result: Readily biodegradable.

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Benzenemethanol, alpha,alpha-dimethyl-:

Biodegradability : Remarks: No data available

Bioaccumulative potential

Components:

dimethyl phthalate:

Bioaccumulation : Bioconcentration factor (BCF): 57
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 1.54

2-Butanone, peroxide:

Partition coefficient: n-octanol/water : log Pow: < 0.3 (25 °C)

Cumene hydroperoxide:

Partition coefficient: n-octanol/water : log Pow: 1.6

Cumene:

Bioaccumulation : Bioconcentration factor (BCF): 94.69
Remarks: Calculation

Partition coefficient: n-octanol/water : log Pow: 3.55 (23 °C)

Hydrogen peroxide:

Partition coefficient: n-octanol/water : log Pow: -1.57
Remarks: Calculation

Benzenemethanol, alpha,alpha-dimethyl-:

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

Mobility in soil

No data available

Other adverse effects

Product:

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

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Components:

dimethyl phthalate:

Additional ecological information : No data available

Cumene 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.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Dispose of wastes in an approved waste disposal facility.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.
Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3105
Proper shipping name : ORGANIC PEROXIDE TYPE D, LIQUID
(METHYL ETHYL KETONE PEROXIDE(S), CUMYL HYDROPEROXIDE)
Class : 5.2
Packing group : Not assigned by regulation
Labels : 5.2

IATA-DGR

UN/ID No. : UN 3105
Proper shipping name : Organic peroxide type D, liquid
(Methyl ethyl ketone peroxide(s), Cumyl hydroperoxide)
Class : 5.2
Packing group : Not assigned by regulation
Labels : Division 5.2 - Organic peroxides, Handling Label - Keep Away From Heat

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Packing instruction (cargo aircraft) : 570

Packing instruction (passenger aircraft) : 570

IMDG-Code

UN number : UN 3105

Proper shipping name : ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S), CUMYL HYDROPEROXIDE)

Class : 5.2

Packing group : Not assigned by regulation

Labels : 5.2

EmS Code : F-J, S-R

Marine pollutant : no

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 3105

Proper shipping name : ORGANIC PEROXIDE TYPE D, LIQUID (METHYL ETHYL KETONE PEROXIDE(S), CUMYL HYDROPEROXIDE)

Class : 5.2

Packing group : Not assigned by regulation

Labels : 5.2

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

National regulatory information

Gefahrgruppe nach § 3 BGV B4: II (German regulatory requirements)

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

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

No. / Code	Chemical name / Category	Threshold quantity
W7.2	Organic peroxides	50 t

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

TCSI (TW) : On the inventory, or in compliance with the inventory

TSCA (US) : All substances listed as active on the TSCA inventory

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AICS (AU)	:	On the inventory, or in compliance with the inventory
DSL (CA)	:	All components of this product are on the Canadian DSL
ENCS (JP)	:	On the inventory, or in compliance with the inventory
ISHL (JP)	:	On the inventory, or in compliance with the inventory
KECI (KR)	:	On the inventory, or in compliance with the inventory
PICCS (PH)	:	On the inventory, or in compliance with the inventory
IECSC (CN)	:	On the inventory, or in compliance with the inventory

16. OTHER INFORMATION

Further information

Other information : This safety datasheet only contains information relating to safety and does not replace any product information or product specification.
These safety instructions also apply to empty packaging which may still contain product residues.

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
GBZ 2.1-2007 : Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

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

ACGIH / C : Ceiling limit

GBZ 2.1-2007 / PC-TWA : Permissible concentration - time weighted average

AICS - Australian Inventory of Chemical Substances; 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

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- 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

Disclaimer

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.

CN / EN