大连合富贸易有限公司
DALIAN HEFU TRADING CO., LTD.

SAFETY DATA SHEET
NOROX MCP-75

SECTION 1. IDENTIFICATION

Product name : NOROX MCP-75

Manufacturer or supplier's details

Company name of supplier : Dalian Hefu Trading Co., LTD

Address : Room 1003 Yihua Building, NO 215 Huanghai Xisi Road
Dalian F.T.Z., Liaoning, China

Telephone : 0086-411-39552935

Telefax : 0086-411-39266880

Emergency telephone : 0086-411-39552935

E-mail address of person responsible for the SDS : Great@dlwawoo.com
tangaizhang@hefuchem.com

Recommended use of the chemical and restrictions on use

Recommended use : Hardener

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Organic peroxides : Type D

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

Specific target organ systemic toxicity - repeated exposure : Category 2

Acute aquatic toxicity : Category 2

Chronic aquatic toxicity : 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. 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/ vapors/ 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. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. P314 Get medical advice/ attention if you feel unwell. 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 < 100 °F/ <

38 °C. Keep cool.
P420 Store away from other materials.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Organic Peroxide
Liquid mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Dimethyl phthalate	131-11-3	>= 30 - < 35
2-Butanone, peroxide	1338-23-4	>= 25 - < 30
Cumene hydroperoxide	80-15-9	>= 20 - < 25
Trimethylpentanediol isobutyrate	6846-50-0	>= 10 - < 15
Cumene	98-82-8	>= 1 - < 5
acetophenone	98-86-2	>= 1 - < 5
Butanone	78-93-3	>= 1 - < 5
Benzenemethanol, alpha,alpha-dimethyl-	617-94-7	>= 1 - < 5
Hydrogen peroxide	7722-84-1	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material 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 center 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. 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.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray 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. Vapors may form explosive mixtures with air. Cool closed containers exposed to fire with water spray.
Specific extinguishing methods	:	Do not use a solid water stream as it may scatter and spread fire. Remove undamaged containers from fire area if it is safe to do so. Use water spray to cool unopened containers.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

		Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

SECTION 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 vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Never return spills in original containers for re-use. Treat recovered material as described in the section "Disposal considerations".
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.
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/vapors/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.

SECTION 7. HANDLING AND STORAGE

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 vapors/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.
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	:	< 100 °F < 38 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Dimethyl phthalate	131-11-3	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL
		TWA	5 mg/m3	OSHA Z-1
		TWA	5 mg/m3	OSHA P0
2-Butanone, peroxide	1338-23-4	C	0.2 ppm	ACGIH
		C	0.2 ppm 1.5 mg/m3	NIOSH REL
		C	0.7 ppm 5 mg/m3	OSHA P0
Cumene hydroperoxide	80-15-9	TWA	1 ppm	US WEEL
Cumene	98-82-8	TWA	50 ppm	ACGIH
		TWA	50 ppm 245 mg/m3	NIOSH REL
		TWA	50 ppm	OSHA Z-1

			245 mg/m3	
		TWA	50 ppm 245 mg/m3	OSHA P0
acetophenone	98-86-2	TWA	10 ppm	ACGIH
		TWA	10 ppm	US WEEL
Butanone	78-93-3	TWA	200 ppm	ACGIH
		STEL	300 ppm	ACGIH
		TWA	200 ppm 590 mg/m3	NIOSH REL
		ST	300 ppm 885 mg/m3	NIOSH REL
		TWA	200 ppm 590 mg/m3	OSHA Z-1
		TWA	200 ppm 590 mg/m3	OSHA P0
		STEL	300 ppm 885 mg/m3	OSHA P0
Hydrogen peroxide	7722-84-1	TWA	1 ppm	ACGIH
		TWA	1 ppm 1.4 mg/m3	NIOSH REL
		TWA	1 ppm 1.4 mg/m3	OSHA Z-1
		TWA	1 ppm 1.4 mg/m3	OSHA P0

Hazardous components without workplace control parameters

Ingredients	CAS-No.
Trimethylpentanediol isobutyrate	6846-50-0
Benzenemethanol, alpha,alpha-dimethyl-	617-94-7

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
Butanone	78-93-3	methyl ethyl ketone	Urine	End of shift (As soon as possible after exposure ceases)	2 mg/l	ACGIH BEI

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

Hand protection

Material : butyl-rubber

Break through time	:	>= 480 min
Glove thickness	:	0.5 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 Wash hands before breaks and at the end of workday.
Eye protection	:	Tightly fitting safety goggles Please wear suitable protective goggles. Also wear face protection if there is a splash hazard. Ensure that eyewash stations and safety showers are close to the workstation location.
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	colorless
Odor	:	slight, mild
Odor Threshold	:	No data available
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: Seta closed cup
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available

Vapor pressure	:	No data available
Relative vapor density	:	> 1
Density	:	1.1 g/cm3
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	No data available
Self-Accelerating decomposition temperature (SADT)	:	60 °C SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	not determined
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Organic peroxide

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable under recommended storage conditions.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Vapors 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

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	Acute toxicity estimate: 858.13 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: 1.61 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: 3,102 mg/kg Method: Calculation method

Ingredients:

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: vapor 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 judgment
Acute inhalation toxicity	:	Acute toxicity estimate: 1.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgment 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 judgment

Cumene hydroperoxide:

Acute oral toxicity	:	LD50 Oral (Rat): 382 mg/kg
Acute inhalation toxicity	:	0.51 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Expert judgment Assessment: The component/mixture is toxic after short term inhalation.
Acute dermal toxicity	:	Acute toxicity estimate: 1,100 mg/kg Method: Expert judgment

Trimethylpentanediol isobutyrate:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: Expert judgment Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LCLo (Rat): > 5.30 mg/l Exposure time: 6 h Test atmosphere: vapor Method: Expert judgment Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Guinea pig): > 18,530 mg/kg Method: Expert judgment Assessment: The substance or mixture has no acute dermal toxicity

Cumene:

Acute oral toxicity	:	LD50 (Rat): 2,700 mg/kg Method: OECD Test Guideline 401
Acute dermal toxicity	:	LD50 (Rabbit): > 3,160 mg/kg

acetophenone:

Acute oral toxicity	:	Acute toxicity estimate: 500 mg/kg Method: Expert judgment Assessment: The component/mixture is moderately toxic after single ingestion. Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
Acute dermal toxicity	:	LD50 (Rat): 3,300 mg/kg Method: OECD Test Guideline 402

Butanone:

Acute oral toxicity	:	LD50 (Rat): 2,193 mg/kg Method: OECD Test Guideline 423
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Method: OECD Test Guideline 402

Benzenemethanol, alpha,alpha-dimethyl-:

Acute oral toxicity	:	LD50 (Rat): 1,300 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): 4,300 mg/kg

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

Skin corrosion/irritation

Causes severe burns.

Product:

Remarks: Extremely corrosive and destructive to tissue.

Ingredients:

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.

Trimethylpentanediol isobutyrate:

Species: Guinea pig
Result: Mild skin irritation

Cumene:

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

acetophenone:

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

Butanone:

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

Benzenemethanol, alpha,alpha-dimethyl-:
Species: Rabbit
Result: Severe skin irritation

Hydrogen peroxide:
Result: Corrosive after 3 minutes or less of exposure

Serious eye damage/eye irritation
Causes serious eye damage.

Product:
Remarks: May cause irreversible eye damage.

Ingredients:

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

2-Butanone, peroxide:
Result: Irreversible effects on the eye

Cumene hydroperoxide:
Species: Rabbit
Result: Corrosive

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

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

acetophenone:
Species: Rabbit
Result: Eye irritation
Method: No information available.
Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Butanone:
Species: Rabbit
Result: Eye irritation
Method: OECD Test Guideline 405

Benzenemethanol, alpha,alpha-dimethyl-:
Result: Irritating to eyes.

Hydrogen peroxide:
Result: Irreversible effects on the eye

Respiratory or skin sensitization

Skin sensitization
Not classified based on available information.

Respiratory sensitization
Not classified based on available information.

Ingredients:

Dimethyl phthalate:
Species: Mouse
Method: OECD Test Guideline 429
Result: Does not cause skin sensitization.

2-Butanone, peroxide:
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitization.

Assessment: Harmful if swallowed., Harmful if inhaled.

Cumene hydroperoxide:
Result: Does not cause skin sensitization.

Trimethylpentanediol isobutyrate:
Species: Guinea pig
Result: Does not cause skin sensitization.

Cumene:
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitization.

acetophenone:
Test Type: Draize Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: Does not cause skin sensitization.

Butanone:

Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: Does not cause skin sensitization.

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

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

Trimethylpentanediol isobutyrate:

Genotoxicity in vitro	:	Method: OECD Test Guideline 476

Result: negative

: Test Type: Ames test
Result: negative

: Method: OECD Test Guideline 473
Result: negative

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

acetophenone:

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

: Method: OECD Test Guideline 476
Result: negative

: Method: OECD Test Guideline 471
Result: negative

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

Butanone:

Genotoxicity in vitro : Method: OECD Test Guideline 471

Result: negative

: Method: OECD Test Guideline 476
Result: negative

: Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Species: Mouse
Application Route: Intraperitoneal
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.

Ingredients:

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:

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

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

IARC Group 2B: Possibly carcinogenic to humans

Cumene 98-82-8

OSHA No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP Reasonably anticipated to be a human carcinogen

Cumene 98-82-8

Reproductive toxicity

Not classified based on available information.

Ingredients:

Dimethyl phthalate:

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

Effects on fetal 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

Cumene hydroperoxide:

Effects on fertility : Remarks: No data available

Effects on fetal development : Remarks: No data available

Cumene:

Effects on fetal development : Species: Rabbit
Application Route: inhalation (vapor)
General Toxicity Maternal: LOAEL: 500
Developmental Toxicity: NOAEL: 2,300

Method: OECD Test Guideline 414

Species: Rat
Application Route: inhalation (vapor)
General Toxicity Maternal: NOAEL: 100
Developmental Toxicity: NOAEL: > 1,200
Method: OECD Test Guideline 414

acetophenone:

Effects on fertility : Species: Rat
Application Route: Ingestion
General Toxicity Parent: NOAEL: 225 mg/kg body weight
General Toxicity F1: NOAEL: 225 mg/kg body weight
Method: OECD Test Guideline 422
Result: negative

Species: Rat
Application Route: Ingestion
General Toxicity Parent: LOAEL: 750 mg/kg body weight
General Toxicity F1: LOAEL: 750 mg/kg body weight
Method: OECD Test Guideline 422

Effects on fetal development : Species: Mouse
Application Route: Ingestion
General Toxicity Maternal: NOAEL: >= 175 mg/kg body weight
Teratogenicity: NOAEL: >= 175 mg/kg body weight
Developmental Toxicity: NOAEL: >= 175 mg/kg body weight
Method: OECD Test Guideline 414
Result: negative

Butanone:

Effects on fertility : Species: Rat
Application Route: oral (drinking water)
General Toxicity Parent: NOAEL: 10,000 mg/l
General Toxicity F1: NOAEL: 10,000 mg/l
Method: OECD Test Guideline 416
Remarks: Based on data from similar materials

Species: Rat
Application Route: oral (drinking water)
General Toxicity Parent: LOAEL: 20,000 mg/l
Method: OECD Test Guideline 416
Remarks: Based on data from similar materials

Effects on fetal development : Species: Rat
Application Route: Inhalation
General Toxicity Maternal: NOAEC: ca. 1,002 mg/kg body weight
Teratogenicity: NOAEC Parent: ca. 1,002 mg/kg body weight
Method: OECD Test Guideline 414
Result: negative

STOT-single exposure

Not classified based on available information.

Ingredients:

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.

Ingredients:

Cumene hydroperoxide:

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

Repeated dose toxicity

Ingredients:

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)
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: > 536 mg/kg
Application Route: oral (feed)

Species: Rat

NOAEL: 125 mg/kg
Application Route: inhalation (vapor)
Method: OECD Test Guideline 413

acetophenone:

Species: Rat
NOAEL: 225 mg/kg
LOAEL: 750 mg/kg
Application Route: Ingestion
Method: OECD Test Guideline 422

Hydrogen peroxide:

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

Aspiration toxicity

Not classified based on available information.

Ingredients:

Dimethyl phthalate:

No aspiration toxicity classification

Cumene:

May be fatal if swallowed and enters airways.

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish	:	Remarks: No data available
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Toxicity to algae	:	Remarks: No data available

Ingredients:

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	:	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 NOEC (Daphnia magna (Water flea)): 26.7 mg/l Method: OECD Test Guideline 202
Toxicity to algae	:	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	:	EC50 (Desmodesmus subspicatus (green algae)): 1.6 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Trimethylpentanediol isobutyrate:

Toxicity to fish	:	NOEC (Lepomis macrochirus (Bluegill sunfish)): >= 6 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 LC50 (Pimephales promelas (fathead minnow)): > 1.55 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): >= 1.46 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Selenastrum capricornutum (green algae)): > 7.49 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	LOEC (Daphnia magna (Water flea)): 0.7 mg/l Exposure time: 21 d

Ecotoxicology Assessment

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

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	:	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 (Chron-	:	NOEC (Daphnia magna (Water flea)): 0.35 mg/l Exposure time: 21 d

ic toxicity)		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.

acetophenone:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 162 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 528 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 86.4 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (green algae)): 24.8 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	IC50: > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Butanone:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 2,993 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 308 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 2,029 mg/l Exposure time: 96 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	NOEC (Pseudomonas putida): 1,150 mg/l Exposure time: 16 h Method: DIN 38 412 Part 8

Hydrogen peroxide:

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

Toxicity to daphnia and other aquatic invertebrates	:	LC50 (Daphnia pulex (Water flea)): 2.4 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Skeletonema costatum (marine diatom)): 1.38 mg/l Exposure time: 72 h NOEC (Skeletonema costatum (marine diatom)): 0.63 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.63 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC50: Method: OECD Test Guideline 209

Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available

Ingredients:

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

Trimethylpentanediol isobutyrate:

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

Cumene:

Biodegradability	:	Result: Readily biodegradable.

acetophenone:

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

Butanone:

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

Benzenemethanol, alpha,alpha-dimethyl-:

Biodegradability	:	Remarks: No data available

Hydrogen peroxide:

Biodegradability	:	Result: Readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation	:	Remarks: No data available

Ingredients:

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

Trimethylpentanediol isobutyrate:

Partition coefficient: n-octanol/water	:	log Pow: 4.48

Cumene:

Bioaccumulation	:	Bioconcentration factor (BCF): 94.69 Remarks: Calculation
Partition coefficient: n-octanol/water	:	log Pow: 3.55 (23 °C)

acetophenone:

Bioaccumulation	:	Bioconcentration factor (BCF): 0.48
Partition coefficient: n-octanol/water	:	log Pow: 1.63

Butanone:

Partition coefficient: n-	:	log Pow: 0.3 (40 °C)

octanol/water

Benzenemethanol, alpha,alpha-dimethyl-:

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

Hydrogen peroxide:

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

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	There is no data available for this product. 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.

SECTION 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.

SECTION 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	:	Organic Peroxides, Keep Away From Heat
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.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3105
Proper shipping name	:	Organic peroxide type D, liquid (Methyl Ethyl Ketone Peroxide, <=26%, Cumyl Hydroperoxide, <=22%)
Class	:	5.2
Packing group	:	Not assigned by regulation
Labels	:	ORGANIC PEROXIDE
ERG Code	:	145
Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
2-Butanone, peroxide	1338-23-4	10	38

Butanone	78-93-3	5000	5000 (D035)
Butanone	78-93-3	100	100 (F005)

SARA 304 Extremely Hazardous Substances Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Hydrogen peroxide	7722-84-1	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Fire Hazard
Reactivity Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 302 : The following components are subject to reporting levels established by SARA Title III, Section 302:

Hydrogen peroxide 7722-84-1

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Cumene hydroperoxide 80-15-9

Dimethyl phthalate 131-11-3

Cumene 98-82-8

acetophenone 98-86-2

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Dimethyl phthalate 131-11-3
acetophenone 98-86-2
Cumene 98-82-8

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

Cumene hydroperoxide 80-15-9
acetophenone 98-86-2
Cumene 98-82-8
Butanone 78-93-3

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Dimethyl phthalate 131-11-3

California Prop. 65 WARNING! This product contains a chemical known in the State of California to cause cancer.

Cumene	98-82-8

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

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

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; 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

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The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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