SAFETY DATA SHEET

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 02-Feb-2010 **Revision Date** 29-Oct-2024 **Revision Number** 10

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THECOMPANY/UNDERTAKING

1.1. Product identifier

Product Description:	**Cumyl hydroperoxide**
Cat No. :	**349960000; 349960010; 349960050; 349962500**
Synonyms	Cumene hydroperoxide
Index No	617-002-00-8
CAS No	80-15-9
EC No	201-254-7
Molecular Formula	C9 H12 O2

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

Recommended Use	Laboratory chemicals.
Uses advised against	No Information available

1.3. Details of the supplier of the safety data sheet

Company

UK entity/business name
Fisher Scientific UK
Bishop Meadow Road,
Loughborough, Leicestershire LE11 5RG, United Kingdom

EU entity/business name
Thermo Fisher Scientific
Janssen Pharmaceuticalaan 3a, 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No. **US:**001-800-424-9300 / **Europe:**001-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Physical hazards

Organic peroxides Type E (H242)

Health hazards

Aspiration Toxicity	Category 1 (H304)
Acute oral toxicity	Category 4 (H302)
Acute dermal toxicity	Category 4 (H312)
Acute Inhalation Toxicity - Vapors	Category 3 (H331)
Skin Corrosion/Irritation	Category 1 (H314) B
Serious Eye Damage/Eye Irritation	Category 1 (H318)
Carcinogenicity	Category 1B (H350)
Reproductive Toxicity	Category 1A (H360D)
Specific target organ toxicity - (repeated exposure)	Category 2 (H373)
Environmental hazards	
Chronic aquatic toxicity	Category 2 (H411)

Full text of Hazard Statements: see section 16

2.2. Label elements

Signal Word **Danger**

Hazard Statements

H242 - Heating may cause a fire
H304 - May be fatal if swallowed and enters airways
H331 - Toxic if inhaled
H314 - Causes severe skin burns and eye damage
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
H302 + H312 - Harmful if swallowed or in contact with skin
Combustible liquid

Precautionary Statements

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280 - Wear protective gloves/protective clothing/eye protection/face protection
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 or shower
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician

Additional EU labelling

Restricted to professional users

2.3. Other hazards

This product does not contain any known or suspected endocrine disruptors

Toxic to terrestrial vertebrates

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

3.2. Mixtures

Component	CAS No	EC No	Weight %	GHS Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Cumene hydroperoxide	80-15-9	EEC No. 201-254-7	80-85	Org. Perox. E (H242) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Eye Dam. 1 (H318) STOT RE 2 (H373) Aquatic Chronic 2 (H411)
Cumene	98-82-8	EEC No. 202-704-5	7-13	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) STOT SE 3 (H335) Carc. 1B (H350) Aquatic Chronic 2 (H411)
2,2-Dimethylbenzyl alcohol	617-94-7	EEC No. 210-539-5	5-8	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)
Acetophenone	98-86-2	EEC No. 202-708-7	0.5-1.5	Acute Tox. 4 (H302) Eye Irrit. 2 (H319)
Dicumyl peroxide	80-43-3	EEC No. 201-279-3	0.46-0.65	Org. Perox. F (H242) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Repr. 1A (H360D) Aquatic Chronic 2 (H411)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Cumene hydroperoxide	Eye Dam. 1 (H318) :: 3%<=C<10% Eye Irrit. 2 (H319) :: 1%<=C<3% Skin Corr. 1B (H314) :: C>=10% Skin Irrit. 2 (H315) :: 3%<=C<10% STOT SE 3 (H335) :: C<10%	-	-

Components	Reach Registration Number	
Cumene hydroperoxide	01-2119475796-19	

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General Advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.
Inhalation	If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Risk of serious damage to the lungs (by aspiration). Remove to fresh air. Immediate medical attention is required.
Self-Protection of the First Aider	Use personal protective equipment as required.

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

Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated

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

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Water mist may be used to cool closed containers. CO_2, dry chemical, dry sand, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons
No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Combustible material. Containers may explode when heated.

Hazardous Combustion Products
Carbon monoxide (CO), Carbon dioxide (CO_2).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Take precautionary measures against static discharges. Remove all sources of ignition.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal. Remove all sources of ignition.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe mist/vapors/spray. Keep away from clothing and other combustible materials. Keep away from open flames, hot surfaces and sources of ignition.

Hygiene Measures
When using do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Keep refrigerated. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Keep away from heat, sparks and flame. Do not store near combustible materials. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

Technical Rules for Hazardous Substances (TRGS) 510 Storage Class (LGK) (Germany) Class 5.2

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits
List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE -** 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

Component	The United Kingdom	European Union	Ireland
Cumene	STEL: 50 ppm 15 min STEL: 250 mg/m³ 15 min TWA: 25 ppm 8 hr TWA: 125 mg/m³ 8 hr Skin		TWA: 10 ppm 8 hr. TWA: 50 mg/m³ 8 hr. STEL: 50 ppm 15 min STEL: 250 mg/m³ 15 min Skin
Acetophenone			TWA: 10 ppm 8 hr. TWA: 49 mg/m³ 8 hr. STEL: 30 ppm 15 min STEL: 147 mg/m³ 15 min

Biological limit values
List source(s):

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)
See table for values

Component	Acute effects local (Dermal)	Acute effects systemic (Dermal)	Chronic effects local (Dermal)	Chronic effects systemic (Dermal)
Cumene 98-82-8 (7-13)				DNEL = 15.4mg/kg bw/day
Acetophenone 98-86-2 (0.5-1.5)				DNEL = 6.3mg/kg bw/day
Dicumyl peroxide 80-43-3 (0.46-0.65)				DNEL = 0.8mg/kg bw/day

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Cumene hydroperoxide 80-15-9 (80-85)				DNEL = 6mg/m^3
Cumene 98-82-8 (7-13)	DNEL = 250mg/m^3			DNEL = 100mg/m^3
Acetophenone 98-86-2 (0.5-1.5)				DNEL = 22mg/m^3
Dicumyl peroxide 80-43-3 (0.46-0.65)				DNEL = 5.6mg/m^3

Predicted No Effect Concentration (PNEC)
See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Cumene hydroperoxide 80-15-9 (80-85)	PNEC = 0.0031mg/L	PNEC = 0.023mg/kg sediment dw	PNEC = 0.031mg/L	PNEC = 0.35mg/L	PNEC = 0.0029mg/kg soil dw
Cumene 98-82-8 (7-13)	PNEC = 0.035mg/L	PNEC = 3.22mg/kg sediment dw	PNEC = 0.012mg/L	PNEC = 200mg/L	PNEC = 0.624mg/kg soil dw
Acetophenone 98-86-2 (0.5-1.5)	PNEC = 0.0864mg/L	PNEC = 0.178mg/kg sediment dw	PNEC = 0.864mg/L	PNEC = 10mg/L	PNEC = 0.155mg/kg soil dw
Dicumyl peroxide 80-43-3 (0.46-0.65)	PNEC = 2.34µg/L	PNEC = 2.24mg/kg sediment dw		PNEC = 100mg/L	PNEC = 0.447mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
Cumene hydroperoxide 80-15-9 (80-85)	PNEC = 0.00031mg/L	PNEC = 0.0023mg/kg sediment dw			
Cumene 98-82-8 (7-13)	PNEC = 0.0035mg/L	PNEC = 0.322mg/kg sediment dw			
Acetophenone 98-86-2 (0.5-1.5)	PNEC = 0.00864mg/L	PNEC = 0.0178mg/kg sediment dw			

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber Neoprene Natural rubber PVC	See manufacturers recommendations	-	EN 374	(minimum requirement)

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use.
Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)
Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.
Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141
When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water system.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical State	Liquid	
Appearance	No information available	
Odor	pungent	
Odor Threshold	No data available	
Melting Point/Range	-30 °C / -22 °F	
Softening Point	No data available	
Boiling Point/Range	No information available	
Flammability (liquid)	Combustible liquid	On basis of test data
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	No data available	

Flash Point	62 °C / 143 °F	**Method -** No information available
Autoignition Temperature	380 °C / 716 °F	
Decomposition Temperature	No data available	
Self-Accelerating Decomposition Temperature (SADT)	75°C	
pH	4-7.5	
Viscosity	No data available	
Water Solubility	Miscible	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	**log Pow**	
Cumene hydroperoxide	1.6	
Cumene	3.55	
Acetophenone	1.63 - 1.65	
Dicumyl peroxide	5.6	
Vapor Pressure	No data available	
Density / Specific Gravity	1.060	
Bulk Density	Not applicable	Liquid
Vapor Density	No data available	(Air = 1.0)
Particle characteristics	Not applicable (liquid)	

9.2. Other information

Molecular Formula	C9 H12 O2
Molecular Weight	152.19
Explosive Properties	explosive air/vapour mixtures possible
Oxidizing Properties	Oxidizer

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Yes

10.2. Chemical stability

Organic peroxide. Hazardous decomposition may occur. Oxidizer: Contact with combustible/organic material may cause fire.

10.3. Possibility of hazardous reactions

Hazardous Polymerization	No information available.
Hazardous Reactions	None under normal processing.

10.4. Conditions to avoid

Temperatures above 40 °C / 104 °F. Excess heat. Do not freeze. Combustible material. Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

10.5. Incompatible materials

Strong oxidizing agents. Reducing Agent. Acids. Bases. Heavy metals. Strong reducing agents. Combustible material.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO_2).

SECTION 11: TOXICOLOGICAL INFORMATION

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

Product Information

(a) acute toxicity;

Oral	Category 4
Dermal	Category 4
Inhalation	Category 3

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cumene hydroperoxide	LD50 = 382 mg/kg (Rat)	LD50 = 0.126 mL/kg (Rabbit)	LC50 = 220 ppm (Rat) 4 h
Cumene	1400 mg/kg (Rat) 2700 mg/kg (Rat)	LD50 = 12300 µL/kg (Rabbit)	LC50 > 3577 ppm (Rat) 6 h
2,2-Dimethylbenzyl alcohol	LD50 = 1300 mg/kg (Rat)	LD50 = 1 mL/kg (Rabbit)	-
Acetophenone	900 mg/kg (Rat) 815 mg/kg (Rat)	3300 mg/kg (Rat)	LC50 > 2.130 mg/L (Rat) 8 h
Dicumyl peroxide	LD50 = 4100 mg/kg (Rat)	LD50 > 2000 mg/kg (Rat)	-

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory	No data available
Skin	No data available

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; Category 1B

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
Cumene	Carc Cat. 1B			Group 2B

(g) reproductive toxicity; Category 1A

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 2

Target Organs Respiratory system, Eyes, Skin, Gastrointestinal tract (GI), Kidney.

(j) aspiration hazard; Category 1

Other Adverse Effects Tumorigenic effects have been reported in experimental animals.

Symptoms / effects,both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated.

11.2. Information on other hazards

Endocrine Disrupting Properties Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Cumene hydroperoxide	LC50: = 3.9 mg/L, 96h static (Oncorhynchus mykiss)		
Cumene	LC50: = 5.1 mg/L, 96h semi-static (Poecilia reticulata) LC50: = 2.7 mg/L, 96h semi-static (Oncorhynchus mykiss) LC50: 6.04 - 6.61 mg/L, 96h flow-through (Pimephales promelas) LC50: = 4.8 mg/L, 96h flow-through (Oncorhynchus mykiss)	EC50: = 0.6 mg/L, 48h (Daphnia magna) EC50: 7.9 - 14.1 mg/L, 48h Static (Daphnia magna)	EC50: = 2.6 mg/L, 72h (Pseudokirchneriella subcapitata)
Acetophenone	Brachydanio rerio: LC50 = 155 mg/L 96h	EC50 = 162 mg/L 48h	
Dicumyl peroxide	LC50: = 15.6 mg/L, 96h (Pimephales promelas) LC50: 80.51 - 146.07 mg/L, 96h semi-static (Poecilia reticulata)		

Component	Microtox	M-Factor
Cumene	EC50 = 0.89 mg/L 5 min EC50 = 1.10 mg/L 15 min EC50 = 1.48 mg/L 30 min EC50 = 172 mg/L 24 h	
Acetophenone	EC50 = 15.5 mg/L 15 min	

12.2. Persistence and degradability

Not readily biodegradable

Persistence Miscible with water, Persistence is unlikely, based on information available.

Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Cumene hydroperoxide	1.6	35.5 dimensionless
Cumene	3.55	35.5 dimensionless
Acetophenone	1.63 - 1.65	No data available
Dicumyl peroxide	5.6	137 - 1470 dimensionless 181 - 667 dimensionless

12.4. Mobility in soil

The product is water soluble, and may spread in water systems . Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment No data available for assessment.

12.6. Endocrine disrupting properties

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant This product does not contain any known or suspected substance

Ozone Depletion Potential This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues/Unused Products Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

European Waste Catalogue (EWC) According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

Other Information Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

14.1. UN number	UN3109
14.2. UN proper shipping name	ORGANIC PEROXIDE TYPE F, LIQUID
Technical Shipping Name	CUMYL HYDROPEROXIDE
14.3. Transport hazard class(es)	5.2
14.4. Packing group	

ADR

14.1. UN number	UN3109
14.2. UN proper shipping name	ORGANIC PEROXIDE TYPE F, LIQUID
Technical Shipping Name	CUMYL HYDROPEROXIDE
14.3. Transport hazard class(es)	5.2
14.4. Packing group	

IATA

14.1. UN number	UN3109
14.2. UN proper shipping name	ORGANIC PEROXIDE TYPE F, LIQUID
Technical Shipping Name	CUMYL HYDROPEROXIDE

14.3. Transport hazard class(es) 5.2

14.4. Packing group

14.5. Environmental hazards Dangerous for the environment
Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk according to IMO instruments Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS), Taiwan (TCSI), Japan (ISHL), New Zealand (NZIoC), Japan (ISHL). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Cumene hydroperoxide	80-15-9	201-254-7	-	-	X	X	KE-24814	X	X
Cumene	98-82-8	202-704-5	-	-	X	X	KE-23957	X	X
2,2-Dimethylbenzyl alcohol	617-94-7	210-539-5	-	-	X	X	KE-11212	X	X
Acetophenone	98-86-2	202-708-7	-	-	X	X	KE-28355	X	X
Dicumyl peroxide	80-43-3	201-279-3	-	-	X	X	KE-03299	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Cumene hydroperoxide	80-15-9	X	ACTIVE	X	-	X	X	X
Cumene	98-82-8	X	ACTIVE	X	-	X	X	X
2,2-Dimethylbenzyl alcohol	617-94-7	X	ACTIVE	X	-	X	X	X
Acetophenone	98-86-2	X	ACTIVE	X	-	X	X	X
Dicumyl peroxide	80-43-3	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed **KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Cumene hydroperoxide	80-15-9	-	Use restricted. See entry 75. (see link for restriction details)	-
Cumene	98-82-8	-	Use restricted. See entry 28. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details)	-
2,2-Dimethylbenzyl alcohol	617-94-7	-	-	-
Acetophenone	98-86-2	-	Use restricted. See entry 75. (see link for restriction	-

			details)	
Dicumyl peroxide	80-43-3	-	Use restricted. See entry 75. (see link for restriction details) Use restricted. See entry 30. (see link for restriction details)	SVHC candidate list - 201-279-3 - Toxic for reproduction, Article 57c

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

REACH links
https://echa.europa.eu/substances-restricted-under-reach
https://echa.europa.eu/authorisation-list
https://echa.europa.eu/candidate-list-table

Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Cumene hydroperoxide	80-15-9	Not applicable	Not applicable
Cumene	98-82-8	Not applicable	Not applicable
2,2-Dimethylbenzyl alcohol	617-94-7	Not applicable	Not applicable
Acetophenone	98-86-2	Not applicable	Not applicable
Dicumyl peroxide	80-43-3	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals
Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?
Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .
Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
Take note of Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations
Take note of Directive 94/33/EC on the protection of young people at work
Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Cumene hydroperoxide	WGK2	
Cumene	WGK3	
2,2-Dimethylbenzyl alcohol	WGK1	
Acetophenone	WGK1	
Dicumyl peroxide	WGK3	

Component	France - INRS (Tables of occupational diseases)
Cumene	Tableaux des maladies professionnelles (TMP) - RG 84
Acetophenone	Tableaux des maladies professionnelles (TMP) - RG 84

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Cumene 98-82-8 (7-13)	Prohibited and Restricted Substances	Group I	

15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H242 - Heating may cause a fire
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H312 - Harmful in contact with skin
H331 - Toxic if inhaled
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
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
H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
IECSC - Chinese Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japanese Existing and New Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate
VOC - (Volatile Organic Compound)

Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards	On basis of test data
Health Hazards	Calculation method
Environmental hazards	Calculation method

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.
First aid for chemical exposure, including the use of eye wash and safety showers.
Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.
Chemical incident response training.

Creation Date	02-Feb-2010
Revision Date	29-Oct-2024
Revision Summary	SDS sections updated.

This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

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Disclaimer

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End of Safety Data Sheet