

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.07.2013

Revision: 20.12.2012

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name

Cumene hydroperoxide

Stock number:

L06866

CAS Number:

80-15-9

EC number:

201-254-7

Index number:

617-002-00-8

1.2 Relevant identified uses of the substance

or mixture and uses advised against.

Identified use:

No further relevant information available.

SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG

A Johnson Matthey Company

Zeppelinstr. 7b

76185 Karlsruhe / Germany

Tel: +49 (0) 721 84007 280

Fax: +49 (0) 721 84007 300

Email: tech@alfa.com

www.alfa.com

Product safety Tel + +049 (0) 7275 988687-0

Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)

Poison Information Center Mainz

www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

Informing department:

1.4 Emergency telephone number:

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Flam. Liq. 3

H226 Flammable liquid and vapour.

Org. Perox. EF

H242 Heating may cause a fire.



GHS06 skull and crossbones

Acute Tox. 3

H331 Toxic if inhaled.



GHS08 health hazard

STOT RE 2

H373 May cause damage to the lung, the kidneys and the skin through prolonged or repeated exposure. Route of exposure: Oral, Inhalative and Dermal.



GHS05 corrosion

Skin Corr. 1B

H314 Causes severe skin burns and eye damage.



GHS09 environment

Aquatic Chronic 2

H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4

H302 Harmful if swallowed.

Acute Tox. 4

H312 Harmful in contact with skin.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

T; Toxic

R23:

Toxic by inhalation.



C; Corrosive

R34:

Causes burns.



Xn; Harmful

R21/22-48/20/22:

Harmful in contact with skin and if swallowed. Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.



O; Oxidising

R7:

May cause fire.



N; Dangerous for the environment

R51/53:

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:

Not applicable

Other hazards that do not result in classification

No information known.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008**

Hazard pictograms

Signal word

Hazard statements

The substance is classified and labelled according to the CLP regulation.

GHS02, GHS05, GHS06, GHS08, GHS09

Danger

H226 Flammable liquid and vapour.

H242 Heating may cause a fire.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H331 Toxic if inhaled.

H314 Causes severe skin burns and eye damage.

H373 May cause damage to the lung, the kidneys and the skin through prolonged or repeated exposure. Route of exposure: Oral, Inhalative and Dermal.

H411 Toxic to aquatic life with long lasting effects.

P210

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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

Precautionary statements(Contd. on page 2)
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P405
P410
P501Store locked up.
Protect from sunlight.
Dispose of contents/container in accordance with local/regional/national/international regulations.**Information pertaining to particular dangers for man and environment****Safety phrases:****2.3 Other hazards****Results of PBT and vPvB assessment****PBT:**

Not applicable.

vPvB:

Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances****CAS# Designation:**

80-15-9 Cumene hydroperoxide

Identification number(s):

201-254-7

EC number:

617-002-00-8

Index number:**SECTION 4: First aid measures****4.1 Description of first aid measures****General information**Instantly remove any clothing soiled by the product.
Remove breathing apparatus only after soiled clothing has been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.**After inhalation**

Seek immediate medical advice.

After skin contact

Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

After swallowing

Rinse opened eye for several minutes under running water. Then consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents**CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.**5.2 Special hazards arising from the substance or mixture**If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide**5.3 Advice for firefighters****Protective equipment:**Wear self-contained breathing apparatus.
Wear full protective suit.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:Ensure adequate ventilation
Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.**6.3 Methods and material for containment and cleaning up:**Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.**Prevention of secondary hazards:**

Dispose of contaminated material as waste according to item 13.

6.4 Reference to other sections

Ensure adequate ventilation.

No special measures required.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.**Information about protection against explosions and fires:**Contact with combustible material may cause fire.
Keep ignition sources away - Do not smoke.**7.2 Conditions for safe storage, including any incompatibilities****Storage****Requirements to be met by storerooms and containers:**

Refrigerate

Information about storage in one common storage facility:Protect from heat.
Do not store with organic materials.
Store away from metal powders.**Further information about storage conditions:**Keep container tightly sealed.
Store in a locked cabinet or with access restricted to technical experts or their assistants.**7.3 Specific end use(s)**

Refrigerate

No further relevant information available.

SECTION 8: Exposure controls/personal protection**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:****80-15-9 Cumene hydroperoxide (100,0%)**MAK (Germany) vgl. Abschn. Xa
WEEL (USA) 6 mg/m³, 1 ppm
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Trade name **Cumene hydroperoxide**

Additional information:	No data	(Contd. of page 2)
8.2 Exposure controls		
Personal protective equipment		
General protective and hygienic measures	The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Store protective clothing separately. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. Use self-contained respiratory protective device in emergency situations. Check protective gloves prior to each use for their proper condition. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Impervious gloves	
Breathing equipment:		
Protection of hands:		
Material of gloves		
Penetration time of glove material		
Eye protection:	Tightly sealed safety glasses. Full face protection	
Body protection:	Protective work clothing.	

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form:	Liquid
Colour:	Colourless
Smell:	Not determined
Odour threshold:	Not determined.

pH-value:	Not determined.
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Change in condition	
Melting point/Melting range:	-30 °C
Boiling point/Boiling range:	100-102 °C (8mm Hg)
Sublimation temperature / start:	Not determined

Flash point:	56 °C
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Self-inflammability:	Not determined.
Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined
Steam pressure:	Not determined
Density at 20 °C	1,03 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with	
Water at 19 °C:	15 g/l
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity	May cause fire.
10.2 Chemical stability	Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions	No dangerous reactions known
10.5 Incompatible materials:	Reducing agents Heat Organic materials Metal powders
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Acute toxicity:	Harmful in contact with skin. Harmful if swallowed. Danger by skin resorption. Fatal if inhaled. Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach. The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.
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LD/LC50 values that are relevant for classification:

Oral	LD50	342 mg/kg (mouse) 382 mg/kg (rat)
Dermal	LD50	490 mg/kg (mouse) 500 mg/kg (rat)
Inhalative	LC50/4H	200 ppm/4H (mouse) 220 ppm/4H (rat)

Skin irritation or corrosion:	Causes severe skin burns.
Eye irritation or corrosion:	Causes serious eye damage.
Sensitization:	No sensitizing effect known.
Germ cell mutagenicity:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.
Carcinogenicity:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product.
Reproductive toxicity:	No effects known.

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Specific target organ system toxicity - repeated exposure:

May cause damage to the lung, the kidneys and the skin through prolonged or repeated exposure. Route of exposure: Oral, Inhalative and Dermal.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Experience with humans:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. Harmful if swallowed.

SECTION 12: Ecological information**12.1 Toxicity**

No further relevant information available.

Aquatic toxicity:

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:

Toxic for fish

Remark:**Additional ecological information:****General notes:**

Do not allow product to reach ground water, water bodies or sewage system.

Toxic for aquatic organisms

Do not allow material to be released to the environment without proper governmental permits.

Water hazard class 2 (Assessment by list): hazardous for water.

Danger to drinking water if even small quantities leak into soil.

Also poisonous for fish and plankton in water bodies.

Toxic to aquatic life.

May cause long lasting harmful effects to aquatic life.

Avoid transfer into the environment.

12.5 Results of PBT and vPvB assessment**PBT:**

Not applicable.

vPvB:

Not applicable.

12.6 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation**

Hand over to disposers of hazardous waste.

Must be specially treated under adherence to official regulations.

Consult state, local or national regulations for proper disposal.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to official regulations.

SECTION 14: Transport information**UN-Number****ADR, IMDG, IATA**

UN3109

14.2 UN proper shipping name**ADR****IMDG, IATA**3109 ORGANIC PEROXIDE TYPE F, LIQUID (Cumene hydroperoxide)
ORGANIC PEROXIDE TYPE F, LIQUID (Cumene hydroperoxide)**14.3 Transport hazard class(es)****ADR****Class****Label****IMDG, IATA**

5.2 (P1) Organic peroxides.

5.2

**Class****Label**

5.2 Organic peroxides.

5.2

Packing group**ADR, IMDG, IATA**

Not applicable

14.5 Environmental hazards:

Environmentally hazardous substance, liquid

14.6 Special precautions for user**Kemler Number:**

Warning: Organic peroxides.

EMS Number:

539

F-J,S-R

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:**ADR****Excepted quantities (EQ):**

E0

Limited quantities (LQ)

125 ml

Transport category

2

Tunnel restriction code

D

UN "Model Regulation":

UN3109, ORGANIC PEROXIDE TYPE F, LIQUID (Cumene hydroperoxide), 5.2

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Chemical****Substances**

Substance is listed.

Standard for the Uniform Scheduling of**Drugs and Poisons**

Substance is not listed.

National regulations**Information about limitation of use:**

Employment restrictions concerning young persons must be observed.

For use only by technically qualified individuals.

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Technical instructions (air):

Class	Share in %
I	100,0

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Water hazard class:**Other regulations, limitations and prohibitive regulations****ELINCS (European List of Notified Chemical Substances)****Substances of very high concern (SVHC)****according to REACH, Article 57****REACH - Pre-registered substances****15.2 Chemical safety assessment:**

Water hazard class 2 (Assessment by list): hazardous for water.

Substance is not listed.

Substance is not listed.

Substance is listed.

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet:**Abbreviations and acronyms:**

Health, Safety and Environmental Department.

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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