

Chemical Safety Data Sheet MSDS / SDS

Lauroyl peroxide

Revision Date:2023-09-23 Revision Number:1

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

Product identifier

Product name : Lauroyl peroxide
CBnumber : CB6255318
CAS : 105-74-8
EINECS Number : 203-326-3
Synonyms : lpo,Dilauroyl peroxide

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 400-158-6606

SECTION 2: Hazards identification

Classification of the substance or mixture

Organic peroxides, Type D

Label elements

Pictogram(s)

□

Signal word : Danger

Hazard statement(s)

H242 Heating may cause a fire

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P220 Keep/Store away from clothing/.../combustible materials.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P410 Protect from sunlight.

P420 Store away from other materials.

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

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P234 Keep only in original packaging.

P235 Keep cool.

P240 Ground and bond container and receiving equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P370+P378 In case of fire: Use ... to extinguish.

Storage

P403 Store in a well-ventilated place.

P410 Protect from sunlight.

P411 Store at temperatures not exceeding ...°C/...°F.

P420 Store separately.

Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards

no data available

SECTION 3: Composition/information on ingredients

Substance

Product name	: Lauroyl peroxide
Synonyms	: lpo,Dilauroyl peroxide
CAS	: 105-74-8
EC number	: 203-326-3
MF	: C24H46O4
MW	: 398.62

SECTION 4: First aid measures

Description of first aid measures

If inhaled

Fresh air, rest.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

Most important symptoms and effects, both acute and delayed

Contact with liquid irritates eyes and skin. Ingestion causes irritation of mouth and stomach. (USCG, 1999)

Indication of any immediate medical attention and special treatment needed

Treatment: prompt washing of affected areas is essential.

SECTION 5: Firefighting measures

Extinguishing media

Water, dry chemical, foam, or carbon dioxide.

Specific Hazards Arising from the Chemical

Behavior in Fire: Can increase the severity of a fire. Becomes sensitive to shock when hot. Containers may explode in a fire. May ignite or explode spontaneously if mixed with flammable materials. (USCG, 1999)

Advice for firefighters

Use water in large amounts, water spray. In case of fire: keep drums, etc., cool by spraying with water. Combat fire from a sheltered position.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Evacuate danger area! Consult an expert! Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Remove all ignition sources. Do NOT absorb in saw-dust or other combustible absorbents. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Environmental precautions

Evacuate danger area! Consult an expert! Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Remove all ignition sources. Do NOT absorb in saw-dust or other combustible absorbents. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Methods and materials for containment and cleaning up

Isolate and remove discharged material. Notify local health and pollution control agencies.

SECTION 7: Handling and storage

Precautions for safe handling

NO open flames, NO sparks and NO smoking. Prevent warming above 25°C. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

Conditions for safe storage, including any incompatibilities

Fireproof. Separated from combustible substances and reducing agents. Cool. Store in a cool, well-ventilated storage of noncombustible construction, distant from residences. Separate from other stocks, especially vulcanizing agents, easily oxidizable organic materials, and combustible material; avoid fire and sparks. Provide large-quantity storage room with cool sprinkler system. Protect containers against physical damage. Do not open containers in storage room. Do not place in glass-stopper or screw-capped containers because of possible explosion caused by frictional handling.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

Individual protection measures

Eye/face protection

Wear safety goggles or face shield.

Skin protection

Protective gloves.

Respiratory protection

Use local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical state	Powder
Colour	White
Odour	Faint pungent, soapy odor
Melting point/freezing point	53-57°C
Boiling point or initial boiling point and boiling range	467°C
Flammability	Flammable.
Lower and upper explosion limit/flammability limit	no data available

Flash point	> 110°C
Auto-ignition temperature	112°C
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Chloroform (Slightly), DMSO (Slightly, Sonicated)
Partition coefficient n-octanol/water	no data available
Vapour pressure	6.56E-09mmHg at 25°C
Density and/or relative density	0.91
Relative vapour density	13.7 (vs air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

Reactivity

Heating may cause violent combustion or explosion. The substance is a strong oxidant. It reacts with combustible and reducing materials. This generates fire and explosion hazard.

Chemical stability

Stable if not overheated

Possibility of hazardous reactions

FIRE HAZARD: ORGANIC PEROXIDES CONTAIN SUFFICIENT AVAILABLE OXYGEN TO SUPPORT THEIR OWN COMBUSTION EVEN IN A DEFICIENCY OR ABSENCE OF ATMOSPHERIC OXYGEN. /PEROXIDES, ORGANIC/LAUROYL PEROXIDE is an oxidizing agent. Can ignite organic materials; hence a dangerous fire and explosion risk [Hawley]. Strongly reduced material such as sulfides, nitrides, and hydrides may react explosively. Vigorous reactions with other reducing agents. With charcoal sometimes ignites. [Bretherick, 5th ed., 1995, p. 1194].

Conditions to avoid

no data available

Incompatible materials

Dangerous fire & explosion risk; will ignite organic materials.

Hazardous decomposition products

Becomes shock sensitive on heating, and self-accelerating decomposition sets in at 49 deg C.

SECTION 11: Toxicological information

Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

Evaluation: No epidemiological data relevant to the carcinogenicity of lauroyl peroxide were available. There is inadequate evidence in experimental animals for the carcinogenicity of lauroyl peroxide. Overall evaluation: Lauroyl peroxide is not classifiable as to its carcinogenicity to humans (Group 3).

Reproductive toxicity

no data available

STOT-single exposure

The aerosol is irritating to the eyes, skin and respiratory tract.

STOT-repeated exposure

no data available

Aspiration hazard

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly.

SECTION 12: Ecological information**Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations

Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

SECTION 14: Transport information

UN Number

ADR/RID: UN3106 (For reference only, please check.)

IMDG: UN3106 (For reference only, please check.)

IATA: UN3106 (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: ORGANIC PEROXIDE TYPE D, SOLID (For reference only, please check.)

IMDG: ORGANIC PEROXIDE TYPE D, SOLID (For reference only, please check.)

IATA: ORGANIC PEROXIDE TYPE D, SOLID (For reference only, please check.)

Transport hazard class(es)

ADR/RID: 5.2 (For reference only, please check.)

IMDG: 5.2 (For reference only, please check.)

IATA: 5.2 (For reference only, please check.)

Packing group, if applicable

ADR/RID: (For reference only, please check.)

IMDG: (For reference only, please check.)

IATA: (For reference only, please check.)

Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)

Listed.

EC Inventory

Listed.

United States Toxic Substances Control Act (TSCA) Inventory

Listed.

China Catalog of Hazardous chemicals 2015

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

PICCS

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC

Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Other Information

Other UN number for water solution (<42%): 3109.

Disclaimer:

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