

## Chemical Safety Data Sheet MSDS / SDS

## Lauroyl peroxide

Revision Date:2024-07-27 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

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## 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

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## 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.

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## SECTION 5: Firefighting measures

### Extinguishing media

Water, dry chemical, foam, or carbon dioxide.

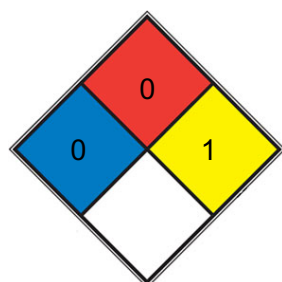
### Specific Hazards Arising from the Chemical

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.

### NFPA 704



**HEALTH 0** Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials

**FIRE 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

**REACT 1** Normally stable, but can become unstable at elevated temperatures and pressures (e.g. [propene](#))

**SPEC.**  
**HAZ.**

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## 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.

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## 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.

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## 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

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## 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

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## 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.

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## **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.

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## 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

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## 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.

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## 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

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## 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.

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## 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?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=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:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.