ChemicalBook

Chemical Safety Data Sheet MSDS / SDS

ACETYL PEROXIDE

Revision Date:2024-12-21 Revision Number:1

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

Product identifier

Product name	: ACETYL PEROXIDE
CBnumber	: CB6256911
CAS	: 110-22-5
EINECS Number	: 203-748-8
Synonyms	: diacetyl peroxide,ACETYL 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

no data available

Label elements

Pictogram(s)

Signal word no data available

Hazard statement(s)

no data available

Precautionary statement(s)

Prevention

no data available

Response

no data available

Storage

no data available

Disposal

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no data available

Other hazards

no data available

SECTION 3: Composition/information on ingredients

Substance

Product name	: ACETYL PEROXIDE
Synonyms	: diacetyl peroxide,ACETYL PEROXIDE
CAS	: 110-22-5
EC number	: 203-748-8
MF	: C4H6O4
MW	: 118.09

SECTION 4: First aid measures

Description of first aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Excerpt from ERG Guide 148 [Organic Peroxides (Heat and Contamination Sensitive / Temperature Controlled)]: Fire may produce irritating, corrosive and/or toxic gases. Ingestion or contact (skin, eyes) with substance may cause severe injury or burns. Runoff from fire control or dilution water may cause pollution. (ERG, 2016)

Indication of any immediate medical attention and special treatment needed

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary . Monitor for shock and treat if necessary . Anticipate seizures and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool .. Do not attempt to neutralize because of exothermic reaction. Cover skin burns with dry, sterile dressings after decontamination . Organic peroxides

SECTION 5: Firefighting measures

Extinguishing media

Fight...with water from explosion-resistant location. in advanced or massive fires...area should be evacuated. if fire occurs in vicinity of this material water should be used to keep containers cool. clean-up & salvage operations should not be attempted until all...cooled completely. 25% soln

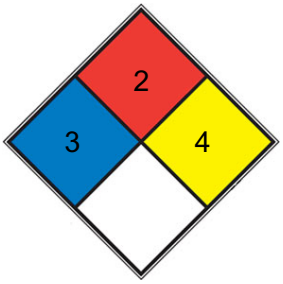
Specific Hazards Arising from the Chemical

Excerpt from ERG Guide 148 [Organic Peroxides (Heat and Contamination Sensitive / Temperature Controlled)]: May explode from heat, contamination or loss of temperature control. These materials are particularly sensitive to temperature rises. Above a given "Control Temperature" they decompose violently and catch fire. May ignite combustibles (wood, paper, oil, clothing, etc.). May ignite spontaneously if exposed to air. May be ignited by heat, sparks or flames. May burn rapidly with flare-burning effect. Containers may explode when heated. Runoff may create fire or explosion hazard. (ERG, 2016)

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

NFPA 704



HEALTH	3	Short exposure could cause serious temporary or moderate residual injury (e.g. liquid hydrogen, sulfuric acid, calcium hypochlorite, hexafluorosilicic acid)
FIRE	2	Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, sulfur)
REACT	4	Readily capable of detonation or explosive decomposition at normal temperatures and pressures (e.g. nitroglycerin,chlorine dioxide, nitrogen triiodide)
SPEC. HAZ.		

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

In event of spillage...spilled material should be absorbed...with noncombustible absorbent, such as vermiculite. sweep up & place in plastic container for immediate disposal. do not use spark-generating metals or cellulosic materials (paper, wood, etc) for sweeping up or handling spilled material. 25% soln

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SECTION 7: Handling and storage

Precautions for safe handling

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

Protect against physical damage. store only in detached, isolated noncombustible building erected for this purpose & used exclusively for this material. do not store solid or paste peroxides in same building... no electrical installation, open flames or other sources of ignition permitted in storage building. 25% soln

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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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical state	The pure compound consists of colorless crystals melting at 30°C. Soluble in alcohol and ether. Often transported as a 25% solution in dimethyl phthalate for use as an initiator and catalyst.
Colour	Colorless crystals
Odour	Strong, pungent odor
Melting point/freezing point	30°C
Boiling point or initial boiling point and boiling range	121.4°C at 760mmHg
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	32.2°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Slightly soluble in cold water
Partition coefficient n-octanol/water	no data available
Vapour pressure	14.6mmHg at 25°C
Density and/or relative density	1.163g/cm3
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

Reactivity

No rapid reaction with air. No rapid reaction with water.

Chemical stability

Highly unstable org peroxides

Possibility of hazardous reactions

DANGEROUS, BY SPONTANEOUS CHEMICAL REACTION. A POWERFUL OXIDIZING AGENT; CAN CAUSE IGNITION OF ORGANIC MATERIALS ON CONTACT.Pure DIACETYL PEROXIDE, a solid, presents a severe explosion hazard. Unpredictably shock sensitive. Five grains detonated violently while being removed from an ice chest [Chem. Eng. News 26:3197(1948)]. May explode violently in contact with ether or any volatile solvent. A 5-gram portion in ether detonated while being carried [Chem. Eng. News 27:175(1949)]. The 25% solution in dimethyl phthalate is less dangerous, but still a strong oxidizing agent that presents a moderate fire risk [Hawley].

Conditions to avoid

no data available

Incompatible materials

Highly dangerous...it will react with water or steam to produce heat; can react vigorously with reducing materials; can emit toxic fumes on contact with acid or acid fumes.

Hazardous decomposition products

no data available

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

no data available

Reproductive toxicity

no data available

STOT-single exposure

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

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: UN3115 (For reference only, please check.)

IMDG: UN3115 (For reference only, please check.)

IATA: UN3115 (For reference only, please check.)

UN Proper Shipping Name

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

IMDG: ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED (For reference only, please check.)

IATA: ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED (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)

Not Listed.

PICCS

Listed.

Vietnam National Chemical Inventory

Not Listed.

IECSC

Not 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?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/