# Chemical Safety Data Sheet MSDS / SDS

# Cyclopentanol

Revision Date:2025-03-01 Revision Number:1

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

# **Product identifier**

Product name	: Cyclopentanol	
CBnumber	: CB5854727	
CAS	: 96-41-3	
EINECS Number	: 202-504-8	
Synonyms	: Cyclopentanol,Cyclopentyl Alcohol	
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	: 010-86108875	

# SECTION 2: Hazards identification

# Classification of the substance or mixture

Flammable liquids, Category 3 Acute toxicity - Category 4, Oral Skin irritation, Category 2

Eye irritation, Category 2

Acute toxicity - Category 4, Inhalation

Specific target organ toxicity - single exposure, Category 3

# Label elements

# Pictogram(s)

Signal word

Warning

Hazard statement(s)

H226 Flammable liquid and vapour

## Precautionary statement(s)

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

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P241 Use explosion-proof electrical/ventilating/lighting/.../equipment.

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

#### Prevention

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

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

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

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

#### Response

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].

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

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P321 Specific treatment (see ... on this label).

P332+P317 If skin irritation occurs: Get medical help.

P362+P364 Take off contaminated clothing and wash it before reuse.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P317 Get medical help.

P319 Get medical help if you feel unwell.

#### Storage

P403+P235 Store in a well-ventilated place. Keep cool.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

## 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	: Cyclopentanol
Synonyms	: Cyclopentanol, Cyclopentyl Alcohol
CAS	: 96-41-3
EC number	: 202-504-8
MF	: C5H10O
MW	: 86.13

# 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 129 [Flammable Liquids (Water-Miscible / Noxious)]: May cause toxic effects if inhaled or absorbed through skin. Inhalation or contact with material may irritate or burn skin and eyes. Fire will produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution. (ERG, 2016)

# Indication of any immediate medical attention and special treatment needed

no data available

# SECTION 5: Firefighting measures

## Extinguishing media

If material on fire or involved in fire: Do not extinguish fire unless flow can be stopped or safely confined. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Use "alcohol" foam, dry chemical or carbon dioxide. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Keep run-off water out of sewers and water sources.

## **Specific Hazards Arising from the Chemical**

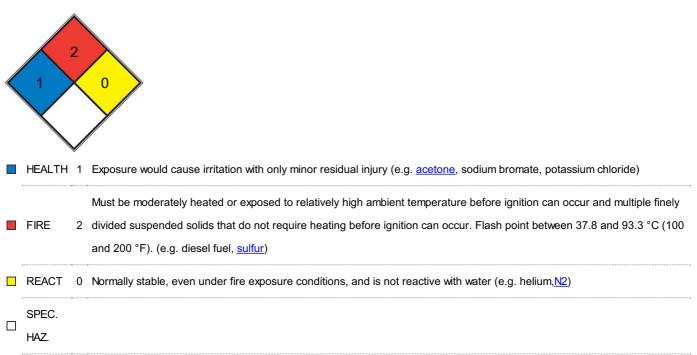
Excerpt from ERG Guide 129 [Flammable Liquids (Water-Miscible / Noxious)]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. (ERG, 2016)

Chemical Book

# Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

# **NFPA 704**



# 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

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use sparkproof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

# 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

In general, materials which are toxic as stored or which can decomp into toxic components...should be stored in cool, well-ventilated place, out of direct rays of sun, away from areas of high fire hazard & should be periodically inspected & monitored.

# 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 riskelimination 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	Liquid
Colour	Clear colorless to slightly yellow
Odour	Odor of amyl alcohol, somewhat like peppermint
Melting point/freezing point	104°C(lit.)
Boiling point or initial boiling point and	140°C
boiling range	
Flammability	no data available
Lower and upper explosion	no data available
limit/flammability limit	
Flash point	47°C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	no data available

no data available
no data available
SOL IN ALCOHOL, ETHER, ACETONE; SLIGHTLY SOL IN WATER
log Kow = 0.71
1892 mm Hg @ 25 deg C
0.949
2.97 (AIR= 1)
no data available

# SECTION 10: Stability and reactivity

# Reactivity

Flammable. Soluble in water.

# **Chemical stability**

no data available

# Possibility of hazardous reactions

MODERATE, IN PRESENCE OF HEAT OR FLAME.CYCLOPENTANOL is an alcohol. Flammable and/or toxic gases are generated by the combination of alcohols with alkali metals, nitrides, and strong reducing agents. They react with oxoacids and carboxylic acids to form esters plus water. Oxidizing agents convert them to aldehydes or ketones. Alcohols exhibit both weak acid and weak base behavior. They may initiate the polymerization of isocyanates and epoxides.

# Conditions to avoid

no data available

# Incompatible materials

no data available

# 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

Cyclopentanol, present at a COD of 200 mg/L, was readily biodegraded with 97% COD removal in 5 days using an adapted, activated sludge inoculum(1). A 5 day BOD test using a non-adapted sewage culture resulted in a BOD nearly 95% of the theoretical for cyclopentanol(2). Cyclopentanol at 100 mg/L had a BOD 53% of the theoretical after 24 hours, using a Warburg respirometer(2). Trichosporon cutaneum KUY-6A, a yeast strain isolated from a soil enrichment culture, was able to grow using cyclopentanol(3).

## **Bioaccumulative potential**

An estimated BCF value of 2 was calculated for cyclopentanol(SRC), using a measured log Kow of 0.71(1) and a recommended regressionderived equation(2). According to a classification scheme(3), this BCF value suggests that bioconcentration in aquatic organisms will not be low(SRC).

# Mobility in soil

The Koc of cyclopentanol is estimated as approximately 58(SRC), using a measured log Kow of 0.71(1) and a regression-derived equation(2,SRC). According to a recommended classification scheme(3), this estimated Koc value suggests that cyclopentanol has high Chemical Book

mobility in soil(SRC).

## 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: UN2244 (For reference only, please check.) IMDG: UN2244 (For reference only, please check.) IATA: UN2244 (For reference only, please check.)

## **UN Proper Shipping Name**

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

## Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.) IMDG: 3 (For reference only, please check.) IATA: 3 (For reference only, please check.)

# Packing group, if applicable

ADR/RID: III (For reference only, please check.) IMDG: III (For reference only, please check.) IATA: III (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?

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

ChemlDplus, 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/

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