

## Chemical Safety Data Sheet MSDS / SDS

## Pinacolone

Revision Date:2026-05-31 Revision Number:1

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

## Product identifier

Product name : Pinacolone  
CBnumber : CB5245383  
CAS : 75-97-8  
EINECS Number : 200-920-4  
Synonyms : pinacolone,3,3-dimethylbutan-2-one

## 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

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

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

## Hazard statements

H225 Highly Flammable liquid and vapour

H302 Harmful if swallowed

## SECTION 3: Composition/information on ingredients

## Substance

Product name : Pinacolone

Synonyms	: pinacolone,3,3-dimethylbutan-2-one
CAS	: 75-97-8
EC number	: 200-920-4
MF	: C6H12O
MW	: 100.16

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## SECTION 4: First aid measures

### **Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

### **Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.

### **Inhalation**

Remove to fresh air. Get medical attention. If not breathing, give artificial respiration.

### **Ingestion**

Do NOT induce vomiting. Get medical attention.

### **Most important symptoms and effects**

Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

### **Self-Protection of the First Aider**

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

### **Notes to Physician**

Treat symptomatically.

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## SECTION 5: Firefighting measures

### **Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Alcohol resistant foam. Water mist may be used to cool closed containers.

### **Extinguishing media which must not be used for safety reasons**

No information available.

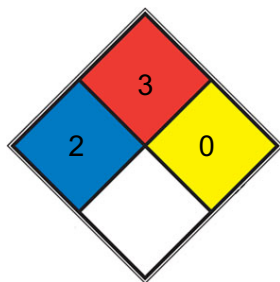
### **Specific Hazards Arising from the Chemical**

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

### **Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## NFPA 704



**HEALTH 2** Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)

**FIRE 3** Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions. Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, [acetone](#))

**REACT 0** Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

SPEC.

HAZ.

## SECTION 6: Accidental release measures

### desc\_info

Personal Precautions																			
Ensure adequate ventilation. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Remove all sources of ignition. Take precautionary measures against static discharges.																			
Environmental Precautions																			
See Section 12 for additional	Ecological Information.																		
Methods for Containment and Clean Up																			
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.																			
Refer to protective measures listed in Sections 8 and 13.																			

## SECTION 7: Handling and storage

### Handling

Ensure adequate ventilation. Wear personal protective equipment/face protection. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes or clothing. Avoid breathing dust/fume/gas/mist/vapors/spray. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

## Storage

Flammables area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame.

## Specific Use(s)

Use in laboratories

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## SECTION 8: Exposure controls/personal protection

### Control Parameters

### Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. MDHS70 General methods for sampling airborne gases and vapours MDHS 88

Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

### Exposure Controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

### Personal protective equipment

#### Eye Protection

Wear safety glasses with side shields (or goggles) (European standard - EN 166)

#### Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber	See manufacturers	-	EN 374	(minimum requirement)
Neoprene	recommendations			
Natural rubber				
PVC				

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g.

sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

**Respiratory Protection**

No protective equipment is needed under normal use conditions.

**Large scale/emergency use**

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

**Small scale/Laboratory use**

Maintain adequate ventilation

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls**

Prevent product from entering drains.

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## SECTION 9: Physical and chemical properties

**Information on basic physicochemical properties**

Clear

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**Physical State**

Liquid

**Odor**

ethereal-minty-camphoraceous, warm-sweet odor

**Odor Threshold**

No data available

**pH**

No information available

**Melting Point/Range**

52.5 °C / -62.5 °F

**Softening Point**

No data available

**Boiling Point/Range**

106 - °C / 222.8 - 194 °F @ 760 mmHg

**Flash Point**

5 °C / 41 °F Method - No information available

**Evaporation Rate**

No data available

**Flammability (solid,gas)**

Not applicable Liquid

**Explosion Limits**

No data available

**Vapor Pressure**

31.5 mmHg @ 25 °C

**Vapor Density**

3.45 (Air = 1.0 ) (Air = 1.0)

**Specific Gravity / Density**

0.800

**Bulk Density**

Not applicable Liquid

**Water Solubility**

Very soluble

**Solubility in other solvents**

19g/l

**Partition Coefficient (n-octanol/water)**

No data available

**desc\_info**

Component: Pinacolone log Pow: 1.27

**Autoignition Temperature**

No data available

**Decomposition Temperature**

No data available

**Viscosity**

No data available

**Explosive Properties**

Vapors may form explosive mixtures with air

**Oxidizing Properties**

No information available

### **Molecular Formula**

C<sub>6</sub> H<sub>12</sub> O

### **Molecular Weight**

100.16

### **Colour**

Clear colorless to light yellow

### **Dielectric constant**

12.8 (17°C)

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## SECTION 10: Stability and reactivity

### **Stability**

No information available.

### **Hazardous Reactions**

No information available.

### **Hazardous Polymerization**

No information available.

### **Conditions to Avoid**

Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

### **Materials to avoid**

Strong oxidizing agents.

### **Hazardous Decomposition Products**

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

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## SECTION 11: Toxicological information

### **Product Information**

#### **(a) acute toxicity;**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Pinacolone	LD50 = 610 mg/kg ( Rat )		

#### **(b) skin corrosion/irritation;**

No data available

**(c) serious eye damage/irritation;**

No data available

**(d) respiratory or skin sensitization;**

**Respiratory**

No data available

**Skin**

No data available

**(e) germ cell mutagenicity;**

No data available

**(f) carcinogenicity;**

No data available

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;**

No data available

**(h) STOT-single exposure;**

No data available

**(i) STOT-repeated exposure;**

No data available

**Target Organs**

No information available.

**(j) aspiration hazard;**

No data available

**Other Adverse Effects**

The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, delayed**

tiredness, nausea and vomiting

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## SECTION 12: Ecological information

**Ecotoxicity effects**

Harmful to aquatic organisms. Do not empty into drains. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

Contains a substance which is: . The product contains following substances which are hazardous for the environment.

Component	Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Pinacolone	LC50: = 87 mg/L, 96h flow-through (Pimephales promelas)			

## Persistence and Degradability

### Persistence

Soluble in water, Persistence is unlikely, based on information available.

### Degradation in sewage

Contains substances known to be hazardous to the environment or not degradable in waste

### treatment plant

water treatment plants.

### Bioaccumulative Potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Pinacolone	1.27	No data available

### Mobility in soil

The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility Highly mobile in soils

### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

### Persistent Organic Pollutant

This product does not contain any known or suspected substance

### Ozone Depletion Potential

This product does not contain any known or suspected substance

## SECTION 13: Disposal considerations

### Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

### Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

### Other Information

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be

landfilled or incinerated, when in compliance with local regulations.

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## SECTION 14: Transport information

### Road and Rail Transport

**UN-No**

UN1224

**Proper Shipping Name**

KETONES, LIQUID, N.O

**Technical Shipping Name**

3,3-Dimethyl-2-butanone

**Hazard Class**

3

**Packing Group**

II

**IMDG/IMO****UN-No**

UN1224

**Proper Shipping Name**

KETONES, LIQUID, N.O

**Technical Shipping Name**

3,3-Dimethyl-2-butanone

**Hazard Class**

3

**Packing Group**

II

**IATA****UN-No**

UN1224

**Proper Shipping Name**

KETONES, LIQUID, N.O

**Technical Shipping Name**

3,3-Dimethyl-2-butanone

**Hazard Class**

3

**Packing Group**

II

**Special Precautions for User**

No special precautions r

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## SECTION 15: Regulatory information

### International Inventories

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

Component	The Inventory of Hazardous Chemicals (2015 Edition)	List of dangerous goods GB 12268 - 2012	TCSI	IECSC	EINECS	TSCA	DSL	PICCS	ENCS	ISHL	AICS	KECL
Pinacolone	X	X	X	X	200-920-4	X	X	X	X	X	X	KE-11259

### National Regulations

## SECTION 16: Other information

### Revision Summary

Not applicable.

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene. Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

### Legend

#### CAS

Chemical Abstracts Service

#### TSCA

United States Toxic Substances Control Act Section 8(b)

Inventory

#### EINECS/ELINCS

European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

#### DSL/NDSL

Canadian Domestic Substances List/Non-Domestic Substances List

#### PICCS

Philippines Inventory of Chemicals and Chemical Substances

#### ENCS

Japanese Existing and New Chemical Substances

**IECSC**

Chinese Inventory of Existing Chemical Substances

**AICS**

Australian Inventory of Chemical Substances

**KECL**

Korean Existing and Evaluated Chemical Substances

**NZIoC**

New Zealand Inventory of Chemicals

**WEL**

Workplace Exposure Limit

**TWA**

Time Weighted Average

**ACGIH**

American Conference of Governmental Industrial Hygienists

**IARC**

International Agency for Research on Cancer

**DNEL**

Derived No Effect Level

**PNEC**

Predicted No Effect Concentration

**RPE**

Respiratory Protective Equipment

**LD50**

Lethal Dose 50%

**LC50**

Lethal Concentration 50%

**EC50**

Effective Concentration 50%

**NOEC**

No Observed Effect Concentration

**POW**

Partition coefficient Octanol:Water

**PBT**

Persistent, Bioaccumulative, Toxic

**vPvB**

very Persistent, very Bioaccumulative

**ICAO/IATA**

International Civil Aviation Organization/International Air  
Transport Association

**IMO/IMDG**

International Maritime Organization/International Maritime  
Dangerous Goods Code

**ADR**

European Agreement Concerning the International Carriage of  
Dangerous Goods by Road

**MARPOL**

International Convention for the Prevention of Pollution from  
Ships

**OECD**

Organisation for Economic Co-operation and Development

**ATE**

Acute Toxicity Estimate

**BCF**

Bioconcentration factor

**VOC**

(Volatile Organic Compound)

**Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

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