

## Chemical Safety Data Sheet MSDS / SDS

**P-NITROPHENYLGLYOXAL**Revision Date:2026-04-25 Revision Number:1

---

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

Product name : P-NITROPHENYLGLYOXAL  
CBnumber : CB1207701  
CAS : 4974-57-6  
Synonyms : 2-(4-nitrophenyl)-2-oxoacetaldehyde,4-nitrophenylglyoxal

**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) : No data available  
Signal word : No data available

**Precautionary statements**

No data available

**Hazard statements**No data available

---

**SECTION 3: Composition/information on ingredients****Substance**

Product name : P-NITROPHENYLGLYOXAL  
Synonyms : 2-(4-nitrophenyl)-2-oxoacetaldehyde,4-nitrophenylglyoxal  
CAS : 4974-57-6  
MF : C8H5NO4

## 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 immediately if symptoms occur.

### Inhalation

Remove to fresh air. Get medical attention immediately if symptoms occur.

### Ingestion

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

### Most important symptoms and effects

None reasonably foreseeable.

### Self-Protection of the First Aider

No special precautions required.

### Notes to Physician

Treat symptomatically.

---

## SECTION 5: Firefighting measures

### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

No information available.

### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

### 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





<input type="checkbox"/> HEALTH	0	Poses no health hazard, no precautions necessary and would offer no hazard beyond that of ordinary combustible materials
<input type="checkbox"/> FIRE	1	Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. <a href="#">mineral oil</a> , ammonia)
<input type="checkbox"/> REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, <a href="#">N2</a> )
<input type="checkbox"/> SPEC.		
<input type="checkbox"/> HAZ.		

---

## SECTION 6: Accidental release measures

### Personal Precautions

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

### Environmental Precautions

Should not be released into the environment.

### Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

Refer to protective measures listed in Sections 8 and 13.

---

## SECTION 7: Handling and storage

### Handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

### Storage

Keep container tightly closed in a dry and well-ventilated place.

### Specific Use(s)

Use in laboratories

---

## SECTION 8: Exposure controls/personal protection

### Control Parameters

### Monitoring methods

## Exposure Controls

### Engineering Measures

None under normal use conditions. .

### 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

Long sleeved clothing

#### 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

#### Recommended Filter type: Particle filter

#### Small scale/Laboratory use

Maintain adequate ventilation

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

### Environmental exposure controls

No information available.

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

No information available

---

#### Physical State

Solid Crystalline

#### Odor

No information available

#### Odor Threshold

No data available

#### pH

Not applicable

#### Melting Point/Range

96 - 98 °C / 204.8 - 208.4 °F

#### Softening Point

No data available

#### Boiling Point/Range

108-123 °C(Press: 1 Torr)

#### Flash Point

No information available

Method - No information available

#### Evaporation Rate

Not applicable Solid

#### Flammability (solid,gas)

No information available

#### Explosion Limits

No data available

#### Vapor Pressure

No data available

#### Vapor Density

Not applicable Solid

#### Specific Gravity / Density

1.376±0.06 g/cm<sup>3</sup>(Predicted)

#### **Bulk Density**

1.376±0.06 g/cm<sup>3</sup>(Predicted)

#### **Water Solubility**

No information available

#### **Solubility in other solvents**

No information available

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

No data available

#### **Autoignition Temperature**

No data available

#### **Decomposition Temperature**

No data available

#### **Viscosity**

Not applicable Solid

#### **Explosive Properties**

No information available

#### **Oxidizing Properties**

No information available

#### **Molecular Formula**

C<sub>8</sub> H<sub>5</sub> N O<sub>4</sub>. xH<sub>2</sub> O

#### **Molecular Weight**

179.13 (anhy.)

#### **Colour**

Cream

---

## SECTION 10: Stability and reactivity

#### **Stability**

Stable under normal conditions.

#### **Hazardous Reactions**

None under normal processing.

## Hazardous Polymerization

No information available.

## Conditions to Avoid

None known.

## Materials to avoid

No information available.

## Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

---

# SECTION 11: Toxicological information

## Product Information

### (a) acute toxicity;

### (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;**

Not applicable

Solid

**Symptoms / effects, both acute and delayed**

No information available

---

## SECTION 12: Ecological information

**Ecotoxicity effects**

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

**Persistence and Degradability**

No information available

**Bioaccumulative Potential**

No information available

**Mobility in soil**

No information available

**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**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

**Contaminated Packaging**

Empty remaining contents. Dispose of in accordance with local regulations. Do not re-use empty containers.

**Other Information**

Waste codes should be assigned by the user based on the application for which the product was used.

---

## SECTION 14: Transport information

### Road and Rail Transport

Not Regulated

### IMDG/IMO

Not regulated

### IATA

Not regulated

### Special Precautions for User

No special precautions required

---

## SECTION 15: Regulatory information

### International Inventories

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

Philippines (PICCS).

### National Regulations

---

## SECTION 16: Other information

### Prepared By

Health, Safety and Environmental Department

### Revision Date

16-Oct-2025

### Revision Summary

Not applicable.

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

### 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

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**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.