

# Chemical Safety Data Sheet MSDS / SDS

## Sodium phosphate monobasic

Revision Date:2024-07-27 Revision Number:1

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### SECTION 1: Identification of the substance/mixture

#### Product identifier

Product name : Sodium phosphate monobasic  
CBnumber : CB6219354  
CAS : 7558-80-7  
EINECS Number : 231-449-2  
Synonyms : sodium phosphate monobasic, Monosodium phosphate

#### 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

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### SECTION 2: Hazards identification

#### GHS Label elements, including precautionary statements

Symbol(GHS)



#### Precautionary statements

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

P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

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

Continuerinsing.

P405 Store locked up.

#### Hazard statements

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

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### SECTION 3: Composition/information on ingredients

## Substance

Product name	: Sodium phosphate monobasic
Synonyms	: sodium phosphate monobasic, Monosodium phosphate
CAS	: 7558-80-7
EC number	: 231-449-2
MF	: H3O4P.Na
MW	: 119.977

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## SECTION 4: First aid measures

### Description of first aid measures

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### Indication of any immediate medical attention and special treatment needed

No data available

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### Special hazards arising from the substance or mixture

Oxides of phosphorus Sodium oxides

Not combustible.

Fire may cause evolution of:

Oxides of phosphorus

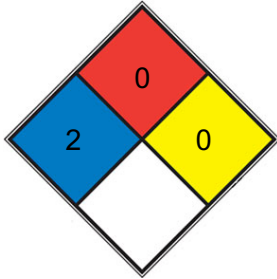
Ambient fire may liberate hazardous vapours.

## Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## 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 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 0** Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

**SPEC.**

**HAZ.**

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

## Precautions for safe handling

For precautions see section 2.2.

## Conditions for safe storage, including any incompatibilities

### Storage conditions

Tightly closed. Dry.

Recommended storage temperature see product label.

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## SECTION 8: Exposure controls/personal protection

### control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

### Exposure controls

#### Appropriate engineering controls

Change contaminated clothing. Wash hands after working with substance.

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0.11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

##### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	colorless crystals
Odour	No data available
Odour Threshold	No data available d) pH 4.0 - 4.5 at 50 g/l at 25 °C Melting point/freezing point Initial boiling point and boiling range Melting point/freezing point: >450 °C - Regulation (EC) No. 440/2008, Annex, A.1 No data available Flash point No data available Evaporation rate No data available Flammability (solid, gas) Upper/lower flammability or explosive limits No data available No data available Vapour pressure No data available Vapour density No data available Relative density 2.36 at 20 °C - Regulation (EC) No. 440/2008, Annex, A.3 Water solubility 50.2 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6- completely soluble Partition coefficient: n-octanol/water Autoignition temperature Decomposition temperature Not applicable for inorganic substances No data available No data available Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: No data available Explosive properties No data available Oxidizing properties No data available
Melting point/freezing point	Melting point/freezing point: >450 °C - Regulation (EC) No. 440/2008, Annex, A.1
Initial boiling point and boiling range	<0°C
Flash point	100°C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	2.36 at 20 °C - Regulation (EC) No. 440/2008, Annex, A.3
Water solubility	50.2 g/l at 20 °C - Regulation (EC) No. 440/2008, Annex, A.6- completely soluble
Partition coefficient: n-octanol/water	Not applicable for inorganic substances
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties	No data available
Oxidizing properties	No data available
$\lambda_{\max}$	$\lambda$ : 260 nm $A_{\max}$ : $\leq 0.025$ $\lambda$ : 280 nm $A_{\max}$ : $\leq 0.02$

### Other safety information

Bulk density ca.940 kg/m<sup>3</sup> Dissociation constant 6.75 at 20.3 °C

- OECD Test Guideline 112

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## SECTION 10: Stability and reactivity

## Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## Possibility of hazardous reactions

Violent reactions possible with: Strong acids

## Conditions to avoid

no information available

## Incompatible materials

No data available

## Hazardous decomposition products

In the event of fire: see section 5

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# SECTION 11: Toxicological information

## Information on toxicological effects

### Acute toxicity

LD50 Oral - Rat - female - > 2,000 mg/kg (OECD Test Guideline 420)

LD50 Inhalation - Rat - male and female - 4 h - > 0.83 mg/l (OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - > 2,000 mg/kg (OECD Test Guideline 402)

### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h (OECD Test Guideline 404)

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation Remarks:

(ECHA)

### Respiratory or skin sensitization

(OECD Test Guideline 429)

### Germ cell mutagenicity

In vitro mammalian cell gene mutation test mouse lymphoma cells

Result: negative Remarks:

(ECHA)

Micronucleus test Human lymphocytes Result: negative

### Carcinogenicity

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Reproductive toxicity

No data available

### Specific target organ toxicity - single exposure

No data available

#### **Specific target organ toxicity - repeated exposure**

No data available

#### **Aspiration hazard**

No data available

#### **Toxicity**

LD50 orally in Rabbit: 8290 mg/kg LD50 dermal Rabbit > 7940 mg/kg

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## SECTION 12: Ecological information

### **Toxicity**

#### **Toxicity to fish**

semi-static test LC50 - *Oncorhynchus mykiss* (rainbow trout) - > 100 mg/l - 96 h

(OECD Test Guideline 203)

#### **Toxicity to daphnia and other aquatic invertebrates**

static test EC50 - *Daphnia magna* (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)

#### **Toxicity to algae**

static test ErC50 - *Desmodesmus subspicatus* (green algae) - > 100 mg/l - 48 h

(OECD Test Guideline 201)

#### **Toxicity to bacteria**

static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

### **Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### **Other adverse effects**

Depending on the concentration, phosphates may contribute to the eutrophication of water supplies.

Discharge into the environment must be avoided.

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## SECTION 13: Disposal considerations

### **Waste treatment methods**

### **Incompatibilities**

Monobasic sodium phosphate is an acid salt and is therefore generally incompatible with alkaline materials and carbonates; aqueous solutions of monobasic sodium phosphate are acidic and will cause carbonates to effervesce. Monobasic sodium phosphate should not be administered concomitantly with aluminum, calcium, or magnesium salts since they bind phosphate and could impair its absorption from the gastrointestinal tract.

### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

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## **SECTION 14: Transport information**

### **UN number**

ADR/RID: - IMDG: - IATA-DGR: -

### **UN proper shipping name**

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA-DGR: Not dangerous goods

### **Transport hazard class(es)**

ADR/RID: - IMDG: - IATA-DGR: -

### **Packaging group**

ADR/RID: - IMDG: - IATA-DGR: -

### **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA-DGR: no

### **Special precautions for user**

### **Incompatible materials**

### **Further information**

Not classified as dangerous in the meaning of transport regulations.

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## **SECTION 15: Regulatory information**

### **Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **Regulations on the Safety Management of Hazardous Chemicals**

China Catalog of Hazardous chemicals 2015:Not Listed. website: <https://www.mem.gov.cn/>

#### **Measures for Environmental Management of New Chemical Substances**

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>



EC Inventory:Listed.

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

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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

【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

【4】 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)

【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

#### Disclaimer:

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