

## Trisodium Phosphate Anhydrous Technical Grade

Version number: 1.0

### SECTION 1: Identification

#### 1.1 Product identifier

Identification of the substance	trisodium orthophosphate
Trade name	<b><u>Trisodium Phosphate Anhydrous Technical Grade</u></b>
CAS number	7601-54-9

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Chemicals for various applications
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#### 1.3 Details of the supplier of the safety data sheet

Valudor Products, LLC 179 Calle Magdalena Suite 100 Encinitas, California CA 92024 United States	Telephone: +1 (760) 635 8500 e-mail: info@valudor.com Website: www.valudor.com
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#### 1.4 Emergency telephone number

Emergency information	800-535-5053 (Infotrac)
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As above or nearest toxicological information centre.

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Classification				
Section	Hazard class	Category	Hazard class and category	Hazard statement
A.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
A.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
A.8R	specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335

For full text of abbreviations: see SECTION 16

#### 2.2 Label elements

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### Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

**Signal word** warning

### Pictograms

**GHS07**



### Hazard statements

**H315** Causes skin irritation.  
**H319** Causes serious eye irritation.  
**H335** May cause respiratory irritation.

### Precautionary statements

**P261** Avoid breathing dust.  
**P264** Wash hands and face thoroughly after handling.  
**P271** Use only outdoors or in a well-ventilated area.  
**P280** Wear protective gloves/protective clothing/eye protection/face protection.  
**P302+P352** If on skin: Wash with plenty of water/...  
**P304+P340** If inhaled: Remove person to fresh air and keep 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. Continue rinsing.  
**P312** Call a poison center/doctor if you feel unwell.  
**P332+P313** If skin irritation occurs: Get medical advice/attention.  
**P337+P313** If eye irritation persists: Get medical advice/attention.  
**P362** Take off contaminated clothing and wash before reuse.  
**P403+P233** Store in a well-ventilated place. Keep container tightly closed.  
**P405** Store locked up.  
**P501** Dispose of contents/container to an authorized waste treatment facility.

## 2.3 Other hazards

### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

<b>Name of substance</b>	trisodium orthophosphate
<b>Identifiers</b>	
CAS No	7601-54-9
<b>Molecular formula</b>	Na <sub>3</sub> P O <sub>4</sub>
<b>Molar mass</b>	163.9 g/mol

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**Purity**

98 - 100 %

### SECTION 4: First-aid measures

#### 4.1 Description of first-aid measures

##### General notes

Self-protection of the first aider.

Remove affected person from the danger area and lay down.

Do not leave affected person unattended.

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

##### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

In case of respiratory tract irritation, consult a physician.

##### Following skin contact

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

If skin irritation occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

##### Following eye contact

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

##### Following ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting.

Get medical advice/attention.

##### Notes for the doctor

None.

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

Cough, pain, choking, and breathing difficulties.

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

None.

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### SECTION 5: Fire-fighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

water, foam, alcohol resistant foam, fire extinguishing powder, coordinate firefighting measures to the fire surroundings

##### Unsuitable extinguishing media

none

#### 5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

##### Hazardous combustion products

phosphorus oxides (P<sub>x</sub>O<sub>y</sub>)

#### 5.3 Advice for firefighters

Non-combustible.

Keep containers cool with water spray.

In case of fire and/or explosion do not breathe fumes.

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

##### Special protective equipment for firefighters

chemical protection suit, Self-contained breathing apparatus (SCBA)

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

##### For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

Control of dust.

Do not breathe dust.

Do not get in eyes, on skin, or on clothing.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

##### For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

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### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Take up mechanically.

#### Advice on how to clean up a spill

Take up mechanically.

Collect spillage.

#### Other information relating to spills and releases

Place in appropriate containers for disposal.

Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Removal of dust deposits.

#### Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room.

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Remove contaminated clothing and protective equipment before entering eating areas.

Do not breathe dust.

Do not get in eyes, on skin, or on clothing.

Wash hands, forearms and face thoroughly after handling.

Preventive skin protection (barrier creams/ointments) is recommended.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Flammability hazards

None.

#### Incompatible substances or mixtures

Incompatible materials: see section 10.

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### **Protect against external exposure, such as**

humidity

### **Consideration of other advice**

Keep away from food, drink and animal feedingstuffs.

### **Ventilation requirements**

Provision of sufficient ventilation.

### **Specific designs for storage rooms or vessels**

Keep container tightly closed and dry.

Hygroscopic solid.

### **Packaging compatibilities**

Keep only in original container.

## **7.3 Specific end use(s)**

No information available.

## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

#### **Occupational exposure limit values (Workplace Exposure Limits)**

No constituent of the product currently has a known exposure limit.

### **8.2 Exposure controls**

#### **Appropriate engineering controls**

Use local and general ventilation.

#### **Individual protection measures (personal protective equipment)**

##### **Eye/face protection**

Wear eye/face protection.

##### **Hand protection**

<b>Material</b>	<b>Material thickness</b>	<b>Breakthrough times of the glove material</b>
IIR: isobutene-isoprene (butyl) rubber	≥ 0,3 mm	>480 minutes (permeation: level 6)
CR: chloroprene (chlorobutadiene) rubber	≥ 0,65 mm	>480 minutes (permeation: level 6)
Nitrile	≥ 0,4 mm	>480 minutes (permeation: level 6)

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Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

### Body protection

Protective clothing for use against solid particulates.

### Respiratory protection

Particulate filter device (EN 143).

P2 (filters at least 94 % of airborne particles, color code: White).

### Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Physical state</b>	solid (crystalline)
<b>Color</b>	white
<b>Odor</b>	odorless
<b>Odor threshold</b>	not determined
<b>Other safety parameters</b>	
pH (value)	12.1 (in aqueous solution: 1 % ( <sup>w</sup> / <sub>w</sub> ))
<b>Melting point/freezing point</b>	73.3 – 76.7 °C
<b>Boiling point or initial boiling point and boiling range</b>	not determined decomposes
<b>Flash point</b>	not applicable
<b>Evaporation rate</b>	not determined
<b>Flammability (solid, gas)</b>	non-combustible
<b>Explosive limits</b>	not determined
Explosion limits of dust clouds	not determined
<b>Vapor pressure</b>	0 Pa at 20 °C

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Density	not determined
Relative density	1.62 (water = 1)
Relative vapour density	not applicable
<b>Solubility(ies)</b>	
Water solubility	>130 – <140 g/l at 20 °C
<b>Partition coefficient</b>	
n-octanol/water (log KOW)	not relevant (inorganic)
Auto-ignition temperature	not determined
<b>Decomposition temperature</b>	not relevant
<b>Viscosity</b>	not relevant (solid)
<b>Explosive properties</b>	none
<b>Oxidizing properties</b>	none
<b>Information for relevant hazard classes according to GHS</b>	hazard classes acc. to GHS (physical hazards): not relevant
<b>9.2 Other information</b>	there is no additional information

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

#### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.  
See below "Conditions to avoid".

#### 10.3 Possibility of hazardous reactions

Strong exothermic reaction with acids.

#### 10.4 Conditions to avoid

Protect from moisture.

#### 10.5 Incompatible materials

acids, light metals (due to the release of hydrogen in an acid/alkaline medium)



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### 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgment (weight of evidence determination).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

##### Acute toxicity

Shall not be classified as acutely toxic (oral).

Shall not be classified as acutely toxic (dermal).

Shall not be classified as acutely toxic (inhalation).

May be harmful if swallowed.

May be harmful in contact with skin.

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD0	>2,000 mg/kg	rat, female	OECD Guideline 420	ECHA
dermal	LD0	>2,000 mg/kg	rat	OECD Guideline 420	ECHA
inhalation: dust/ mist	LC0	>0.83 mg/l/4h	rat	-	-
inhalation: dust/ mist	LC50	>0.83 mg/l/4h	rat	EPA OPP 81-3	ECHA

##### Skin corrosion/irritation

Causes skin irritation.

##### Serious eye damage/eye irritation

Causes serious eye irritation.

(EPA OTS 798.4500)

##### Respiratory or skin sensitization

###### Skin sensitization

Shall not be classified as a skin sensitizer.

(OECD Guideline 429)

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### **Respiratory sensitization**

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### **Germ cell mutagenicity**

Shall not be classified as germ cell mutagenic.  
(OECD Guideline 471, OECD Guideline 487, OECD Guideline 490)

### **Carcinogenicity**

#### **IARC Monographs**

not listed

#### **National Toxicology Program (United States)**

not listed

#### **OSHA Carcinogens**

Not listed.

### **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

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

Shall not be classified as a specific target organ toxicant (single exposure).  
May cause respiratory irritation.

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

Shall not be classified as a specific target organ toxicant (repeated exposure).

### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

## **11.2 Other information**

There is no additional information.

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

#### **Aquatic toxicity (acute)**

Based on available data, the classification criteria are not met.

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Endpoint	Exposure time	Value	Species	Method	Source
LC50	96 h	>100 mg/l	rainbow trout ( <i>Oncorhynchus mykiss</i> )	OECD Guideline 203	ECHA
EC50	48 h	>100 mg/l	daphnia magna	OECD Guideline 202	ECHA
ErC50	72 h	>100 mg/l	algae ( <i>Desmodium subspicatus</i> )	OECD Guideline 201	ECHA

### Aquatic toxicity (chronic)

Based on available data, the classification criteria are not met.

Endpoint	Exposure time	Value	Species	Method	Source
EC50	3 h	>1,000 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA
NOEC	72 h	>100 mg/l	algae ( <i>Desmodium subspicatus</i> )	OECD Guideline 201	ECHA
NOEC	3 h	1,000 mg/l	activated sludge of a predominantly domestic sewage	OECD Guideline 209	ECHA

## 12.2 Persistence and degradability

### Biodegradation

The study does not need to be conducted because the substance is inorganic.

### Persistence

The study does not need to be conducted because the substance is inorganic.

## 12.3 Bioaccumulative potential

**n-octanol/water (log KOW)**

not relevant  
(inorganic)

## 12.4 Mobility in soil

No data available.

## 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## 12.6 Other adverse effects

Data are not available.

### Remarks

None.

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packages

Completely emptied packages can be recycled.  
Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions.

### SECTION 14: Transport information

14.1 UN number not assigned

14.2 UN proper shipping name -

14.3 Transport hazard class(es) -

14.4 Packing group -

14.5 Environmental hazards -

14.6 Special precautions for user -

14.7 Transport in bulk according to IMO instruments -

#### 14.8 Information for each of the UN Model Regulations

**Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information**

Not subject to transport regulations.

### SECTION 15: Regulatory information

#### 15.1 Safety, health and environmental regulations specific for the product in question

##### National regulations (United States)

**Toxic Substance Control Act (TSCA)** Substance is listed (ACTIVE)

##### Superfund Amendment and Reauthorization Act (SARA TITLE III )

**The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)**

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Not listed

## Specific Toxic Chemical Listings (EPCRA Section 313)

Not listed

## Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

### List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	Name acc. to inventory	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
trisodium orthophosphate	Sodium phosphate, tribasic	7601-54-9	-	1	5000 (2270)

#### Legend

1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

## Clean Air Act

Not listed

## Right to Know Hazardous Substance List

### Toxic or Hazardous Substance List (MA-TURA)

Name of substance	Name acc. to inventory	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Thres hold	De Minimis Concentration Threshold
trisodium orthophosphate	Sodium phosphate, tribasic	7601-54-9	-	-	-	1.0 %

### Hazardous Substances List (MN-ERTK)

Name of substance	Name acc. to inventory	CAS No	References	Remarks
trisodium orthophosphate	Trisodium phosphate	7601-54-9	I	-

#### Legend

I American Industrial Hygiene Association (AIHA), "Workplace Environmental Exposure Level Guides" (1992), available from AIHA

### Hazardous Substance List (NJ-RTK)

Name of substance	Name acc. to inventory	CAS No	Remarks	Classifications	Listed in	Substance number	DOT number
trisodium orthophosphate	SODIUM PHOSPHATE, TRIBASIC (PHOS-	7601-54-9	-	R1.	3 17	1724	3082

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Name of substance	Name acc. to inventory	CAS No	Remarks	Classifications	Listed in	Substance number	DOT number
	PHORIC ACID, TRISODIUM SALT)				20		

### Legend

- 17 "2008 Emergency Response Guidebook," Research and Special Programs Administration, U.S. Department of Transportation, 2008.
- 20 List of Hazardous Substances and Reportable Quantities (RQ), Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), U.S. Environmental Protection Agency, 40 CFR 302, Table 302.4, July 1, 2008.
- 3 Office of Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, 49 CFR 172.101-Hazardous Materials Table, October 1, 2008.
- R1 Reactive - First Degree

### Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
PHOSPHORIC ACID, TRISODIUM SALT	7601-54-9	E

### Legend

- E Environmental hazard

### Hazardous Substance List (RI-RTK)

Not listed

### California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Not listed

### Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

Not listed

## SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2024-03-04

### Abbreviations and acronyms

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Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IARC	International Agency for Research on Cancer
IARC Mono-graphs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LHS	Lower hazard substance
NOEC	No Observed Effect Concentration
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

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### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### Responsible for the safety data sheet

Chemical Regulatory Compliance Com- Telephone: +1 (630) 410-1660  
pany e-Mail: GHS@crc-us.com  
Jasper, GA Website: www.crc-us.com  
USA

### Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.