

## Chemical Safety Data Sheet MSDS / SDS

## Sodium tert-pentoxide

Revision Date:2024-12-21 Revision Number:1

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

## Product identifier

Product name : Sodium tert-pentoxide  
CBnumber : CB6223269  
CAS : 14593-46-5  
EINECS Number : 238-639-4  
Synonyms : Sodium tert-pentoxide,sta

## 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 : 400-158-6606

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P413 Store bulk masses greater than ... kg/...lbs at temperatures not exceeding ... oC/...oF.  
P407 Maintain air gap between stacks/pallets.  
P405 Store locked up.  
P403+P235 Store in a well-ventilated place. Keep cool.  
P370+P378 In case of fire: Use ... for extinction.  
P331 Do NOT induce vomiting.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continuerinsing.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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

P235+P410 Keep cool. Protect from sunlight.

P231+P232 Handle under inert gas. Protect from moisture.

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

#### **Hazard statements**

H373 May cause damage to organs through prolonged or repeated exposure

H351 Suspected of causing cancer

H336 May cause drowsiness or dizziness

H335 May cause respiratory irritation

H318 Causes serious eye damage

H314 Causes severe skin burns and eye damage

H304 May be fatal if swallowed and enters airways

H302 Harmful if swallowed

H261 In contact with water releases flammable gas

H251 Self-heating; may catch fire

H228 Flammable solid

H225 Highly Flammable liquid and vapour

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## SECTION 3: Composition/information on ingredients

### **Substance**

|              |                             |
|--------------|-----------------------------|
| Product name | : Sodium tert-pentoxide     |
| Synonyms     | : Sodium tert-pentoxide,sta |
| CAS          | : 14593-46-5                |
| EC number    | : 238-639-4                 |
| MF           | : C5H11NaO                  |
| MW           | : 110.13                    |

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## SECTION 4: First aid measures

### **Description of first aid measures**

#### **General advice**

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### **If inhaled**

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### **In case of skin contact**

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

#### **In case of eye contact**

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

#### **If swallowed**

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not

attempt to neutralise.

### 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

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) Dry powder

#### Unsuitable extinguishing media

Water Foam

### Special hazards arising from the substance or mixture

Carbon oxides Sodium oxides Combustible.

May not get in touch with: Water

Development of hazardous combustion gases or vapours possible in the event of fire.

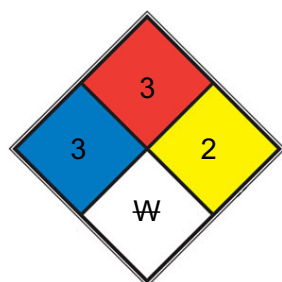
### Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### Further information

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 | 3 | Short exposure could cause serious temporary or moderate residual injury (e.g. <a href="#">liquid hydrogen</a> , <a href="#">sulfuric acid</a> , <a href="#">calcium hypochlorite</a> , hexafluorosilicic acid)  |
| ■ 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, <a href="#">acetone</a> ) |
| ■ REACT  | 2 | Undergoes violent chemical change at elevated temperatures and pressures, reacts violently with water, or may form explosive mixtures with water (e.g. white phosphorus, <a href="#">potassium</a> , <a href="#">sodium</a> )  |

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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. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### Environmental precautions

Do not let product enter drains. Risk of explosion.

### 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

#### Advice on safe handling

Keep workplace dry. Do not allow product to come into contact with water.

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

### Conditions for safe storage, including any incompatibilities

#### Storage conditions

Tightly closed. Keep away from heat and sources of ignition. Never allow product to get in contact with water during storage.

Handle and store under inert gas. Over time, pressure may increase causing containers to burst. Handle and open container with care. Air sensitive. Moisture sensitive.

#### Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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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

#### 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). Tightly fitting safety goggles

##### 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

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

##### Body Protection

Flame retardant antistatic protective clothing.

##### Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

##### Control of environmental exposure

Do not let product enter drains. Risk of explosion.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance light yellow powder

Odour odorless

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|  |   |
|--|---|
| Odour Threshold                              | No data available   |
| pH   | No data available   |
| Melting point/freezing point                 | Melting point: 300 °C - OECD Test Guideline 102   |
| Initial boiling point and boiling range      | No data available   |
| Flash point                                  | -21 °C  |
| Evaporation rate                             | No data available   |
| Flammability (solid, gas)                    | The substance or mixture is a flammable solid with the category - Regulation (EC) No. 440/2008, Annex, A.10                   |
| Upper/lower flammability or explosive limits | No data available   |
| Vapour pressure                              | No data available   |
| Vapour density                               | 0.91  |
| Relative density                             | No data available 1,12 at 20 °C - OECD Test Guideline 109   |
| Water solubility                             | No data available   |
| Partition coefficient: n-octanol/water       | No data available   |
| Autoignition temperature                     | 110 °C - Regulation (EC) No. 440/2008, Annex, A.16The substance or mixture is classified as self heating with the category 1. |
| 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   |

### Other safety information

No data available

## SECTION 10: Stability and reactivity

### Reactivity

Self-heating; may catch fire.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### Chemical stability

sensitive to moisture

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Do not allow water to enter container. Air Moisture.

### Incompatible materials

Reacts violently with water., Strong oxidizing agents, acids, Alcohols

## 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

Oral

Acute toxicity estimate Inhalation - 4 h - 1,6 mg/l (Expert judgment)

Remarks: (ECHA)

Acute toxicity estimate Inhalation - 4 h - 1,6 mg/l (Expert judgment)

Remarks: (ECHA)

Acute toxicity estimate Dermal - 1.100,1 mg/kg (Expert judgment)

Remarks: (ECHA)

Acute toxicity estimate Dermal - 1.100,1 mg/kg (Expert judgment)

Remarks: (ECHA)

#### Skin corrosion/irritation

#### Serious eye damage/eye 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

#### Specific target organ toxicity - single exposure

May cause respiratory irritation.

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available

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## SECTION 12: Ecological information

### Toxicity

No data available

### Persistence and degradability

No data available

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

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

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **Other adverse effects**

No data available

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## **SECTION 13: Disposal considerations**

### **Waste treatment methods**

#### **Product**

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## **SECTION 14: Transport information**

### **UN number**

ADR/RID: 3206 IMDG: 3206 IATA: 3206

### **UN proper shipping name**

ADR/RID: ALKALI METAL ALCOHOLATES, SELF- HEATING, CORROSIVE, N.O.S. (Sodium 2-methylbutan-2-olate)

IMDG: ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S. (Sodium 2-methylbutan-2-olate)

IATA: Alkali metal alcoholates, self-heating, corrosive, n.o.s. (Sodium 2-methylbutan- 2-olate)

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

ADR/RID: 4.2 (8) IMDG: 4.2 (8) IATA: 4.2 (8)

### **Packaging group**

ADR/RID: II IMDG: II IATA: II

### **Environmental hazards**

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

### **Special precautions for user**

No data available



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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

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

EC Inventory:Listed.

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

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

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Not Listed. website: <https://emb.gov.ph/>

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

New Zealand Inventory of Chemicals (NZIoC):Not Listed. website: <https://www.epa.govt.nz/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Not Listed. website: <https://www.mee.gov.cn/>

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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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