

## Chemical Safety Data Sheet MSDS / SDS

## Sodium oxide

Revision Date:2025-01-25 Revision Number:1

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

**Product identifier**

Product name : Sodium oxide  
CBnumber : CB4149921  
CAS : 1313-59-3  
EINECS Number : 215-208-9  
Synonyms : Na<sub>2</sub>O,sodium oxide

**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

**Classification of the substance or mixture**

Skin corrosion, Sub-category 1B

**Label elements****Pictogram(s)**

☐

Signal word : Danger

**Hazard statement(s)**

H271 May cause fire or explosion; strong oxidiser

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

**Precautionary statement(s)**

P220 Keep/Store away from clothing/.../combustible materials.

P221 Take any precaution to avoid mixing with combustibles/...

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

P283 Wear fire/flame resistant/retardant clothing.

P310 Immediately call a POISON CENTER or doctor/physician.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

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

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P405 Store locked up.

#### **Prevention**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash ... thoroughly after handling.

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

#### **Response**

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P316 Get emergency medical help immediately.

P321 Specific treatment (see ... on this label).

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

#### **Storage**

P405 Store locked up.

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards**

no data available

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name	: Sodium oxide
Synonyms	: Na <sub>2</sub> O, sodium oxide
CAS	: 1313-59-3
EC number	: 215-208-9
MF	: Na <sub>2</sub> O
MW	: 61.98

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## SECTION 4: First aid measures

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

#### **If inhaled**

Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer immediately for medical attention.

### Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer immediately for medical attention.

### Following eye contact

Rinse with plenty of water for several minutes (remove contact lenses if easily possible). Refer immediately for medical attention.

### Following ingestion

Rinse mouth. Do NOT induce vomiting. Refer immediately for medical attention.

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

no data available

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

no data available

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## SECTION 5: Firefighting measures

### Extinguishing media

NO water. Use dry powder, dry sand.

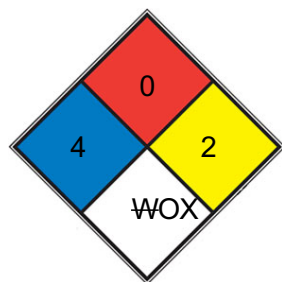
### Specific Hazards Arising from the Chemical

Not combustible but enhances combustion of other substances.

### Advice for firefighters

NO water. Use dry powder, dry sand.

### NFPA 704



■	HEALTH	4	Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, <a href="#">hydrofluoric acid</a> )
■	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	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> )
□	SPEC. HAZ.	WOX	Oxidizer, allows chemicals to burn without an air supply (e.g. <a href="#">potassium perchlorate</a> , <a href="#">ammonium nitrate</a> , hydrogen peroxide). Reacts with water in an unusual or dangerous manner(e.g. caesium, <a href="#">sodium</a> , <a href="#">sulfuric acid</a> ).

## SECTION 6: Accidental release measures

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

Personal protection: chemical protection suit including self-contained breathing apparatus. Sweep spilled substance into covered dry, plastic containers. Wash away remainder with plenty of water.

### **Environmental precautions**

Personal protection: chemical protection suit including self-contained breathing apparatus. Sweep spilled substance into covered dry, plastic containers. Wash away remainder with plenty of water.

### **Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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## SECTION 7: Handling and storage

### **Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

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

Separated from strong acids and food and feedstuffs. Dry.

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## SECTION 8: Exposure controls/personal protection

### **Control parameters**

#### **Occupational Exposure limit values**

no data available

#### **Biological limit values**

no data available

### **Exposure controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### **Individual protection measures**

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

Wear face shield or eye protection in combination with breathing protection if powder.

#### **Skin protection**

Protective gloves. Protective clothing.

#### **Respiratory protection**

Use local exhaust. Use breathing protection.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Beads
Colour	White to gray
Odour	no data available
Melting point/freezing point	>400°C
Boiling point or initial boiling point and boiling range	Decomposes at 1950°C
Flammability	Not combustible but enhances combustion of other substances.
Lower and upper explosion limit/flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	in water: reaction
Partition coefficient n-octanol/water	no data available
Vapour pressure	no data available
Density and/or relative density	2.27
Relative vapour density	2.27
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### Reactivity

The solution in water is a strong base. It reacts violently with acid and is corrosive. Reacts violently with water. This produces sodium hydroxide. Decomposes at >400°C. This produces sodium peroxide and sodium. Attacks many metals in the presence of water.

### Chemical stability

no data available

### Possibility of hazardous reactions

The solution in water is a strong base. It reacts violently with acid and is corrosive. Reacts violently with water. This produces sodium hydroxide. Decomposes at >400°C. This produces sodium peroxide and sodium. Attacks many metals in the presence of water.

### Conditions to avoid

no data available

#### **Incompatible materials**

no data available

#### **Hazardous decomposition products**

no data available

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## SECTION 11: Toxicological information

#### **Acute toxicity**

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

#### **Skin corrosion/irritation**

no data available

#### **Serious eye damage/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

#### **STOT-single exposure**

The substance is corrosive to the eyes, skin and respiratory tract. Corrosive on ingestion. Inhalation of the aerosol may cause lung oedema. See Notes. Medical observation is indicated.

#### **STOT-repeated exposure**

no data available

#### **Aspiration hazard**

A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

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## SECTION 12: Ecological information

## **Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

## **Persistence and degradability**

no data available

## **Bioaccumulative potential**

no data available

## **Mobility in soil**

no data available

## **Other adverse effects**

no data available

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# SECTION 13: Disposal considerations

## **Disposal methods**

### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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# SECTION 14: Transport information

## **UN Number**

ADR/RID: UN1825 (For reference only, please check.)

IMDG: UN1825 (For reference only, please check.)

IATA: UN1825 (For reference only, please check.)

## **UN Proper Shipping Name**

ADR/RID: SODIUM MONOXIDE (For reference only, please check.)

IMDG: SODIUM MONOXIDE (For reference only, please check.)

IATA: SODIUM MONOXIDE (For reference only, please check.)

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

ADR/RID: 8 (For reference only, please check.)

IMDG: 8 (For reference only, please check.)

IATA: 8 (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

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## SECTION 15: Regulatory information

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

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

#### **China Catalog of Hazardous chemicals 2015**

Listed.

#### **New Zealand Inventory of Chemicals (NZIoC)**

Listed.

#### **PICCS**

Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.

#### **Korea Existing Chemicals List (KECL)**

Listed.

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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

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

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

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

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=0&request_locale=en)

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

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

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

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

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

### Other Information

Reacts violently with fire extinguishing agents such as water. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered. See ICSC 0360.

#### 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.