

## Chemical Safety Data Sheet MSDS / SDS

**Sodium Methoxide**Revision Date:2025-02-01 Revision Number:1

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

Product name : Sodium Methoxide  
CBnumber : CB6390309  
CAS : 124-41-4  
EINECS Number : 204-699-5  
Synonyms : Sodium methoxide,sodium methylate

**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

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**SECTION 2: Hazards identification****Classification of the substance or mixture**

Self- heating substances and mixtures, Category 1  
Skin corrosion, Sub-category 1B

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

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Signal word : Danger

**Hazard statement(s)**

H225 Highly Flammable liquid and vapour  
H226 Flammable liquid and vapour  
H228 Flammable solid  
H251 Self-heating; may catch fire  
H301 Toxic if swallowed  
H302 Harmful if swallowed  
H303 May be harmful if swallowed

H311 Toxic in contact with skin  
H314 Causes severe skin burns and eye damage  
H315 Causes skin irritation  
H318 Causes serious eye damage  
H331 Toxic if inhaled  
H360 May damage fertility or the unborn child  
H370 Causes damage to organs  
H372 Causes damage to organs through prolonged or repeated exposure

#### **Precautionary statement(s)**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash hands thoroughly after handling.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P235+P410 Keep cool. Protect from sunlight.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P311 Call a POISON CENTER or doctor/physician.  
P301+P310 IF SWALLOWED: 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.  
Continuerinsing.  
P307+P311 IF exposed: call a POISON CENTER or doctor/physician.  
P405 Store locked up.  
P407 Maintain air gap between stacks/pallets.  
P420 Store away from other materials.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container to.....

#### **Prevention**

P235 Keep cool.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 Wash ... thoroughly after handling.

#### **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**

P407 Maintain air gap between stacks or pallets.

P410 Protect from sunlight.

P413 Store bulk masses greater than ... kg/...lbs at temperatures not exceeding ...°C/...°F.

P420 Store separately.

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 Methoxide
Synonyms	: Sodium methoxide, sodium methylate
CAS	: 124-41-4
EC number	: 204-699-5
MF	: CH <sub>3</sub> NaO
MW	: 54.02

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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**

First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again. Refer immediately for medical attention.

#### **Following eye contact**

Rinse with plenty of water (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

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

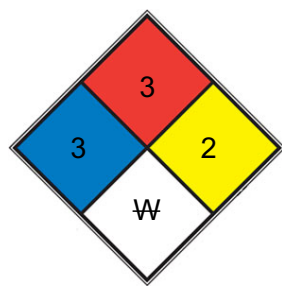
### Specific Hazards Arising from the Chemical

Highly flammable. Many reactions may cause fire or explosion. Risk of fire and explosion on contact with water, moist air or metals.

### Advice for firefighters

NO water. NO hydrous agents. Use dry powder, dry sand. In case of fire: keep drums, etc., cool by spraying with water. NO direct contact with water.

### NFPA 704



<input type="checkbox"/>	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)
<input type="checkbox"/>	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> )
<input type="checkbox"/>	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> )
<input type="checkbox"/>	SPEC. HAZ.	W	

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Remove all ignition sources. Evacuate danger area! Consult an expert! Personal protection: complete protective clothing including self-contained breathing apparatus. Cover the spilled material with dry sand. Sweep spilled substance into covered dry plastic containers. Carefully collect remainder. Then store and dispose of according to local regulations. Do NOT wash away into sewer.

### Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## 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

NO open flames, NO sparks and NO smoking. NO contact with water. 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

Fireproof. Separated from strong oxidants, acids, metals and food and feedstuffs. Dry. Cool. Well closed. Store in an area having corrosion resistant concrete floor. Store in an area without drain or sewer access.

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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.

#### Skin protection

Protective gloves. Protective clothing.

#### Respiratory protection

Use local exhaust and breathing protection.

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Powder
Colour	, clarity of solution to pass
Odour	no data available
Melting point/freezing point	Atm. press.:Ca. 1 atm. Remarks:No melting was observed before decomposition (according the visual check after heating).
Boiling point or initial boiling point and boiling range	Atm. press.:Ca. 1 atm. Remarks:The substance decomposes without melting or boiling.
Flammability	no data available
Lower and upper explosion limit/flammability limit	36%
Flash point	33°C
Auto-ignition temperature	>= 25 - <= 50 °C. Remarks:At atm. press. of ca.1013.0 hPa.
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Miscible with ethanol, methanol, fats and esters.Immiscible with hydrocarbons and organic solvents.
Partition coefficient n-octanol/water	log Pow = -0.72. Temperature:25 °C.;log Pow = -0.75. Temperature:25 °C.
Vapour pressure	50 mm Hg ( 20 °C)
Density and/or relative density	0.945
Relative vapour density	0.945
Particle characteristics	no data available

## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

no data available

### Possibility of hazardous reactions

Dust explosion possible if in powder or granular form, mixed with air.Heating may cause violent combustion or explosion. Reacts violently with water. This produces flammable methanol and corrosive sodium hydroxide. The substance may ignite spontaneously on contact with moist air. The substance is a strong reducing agent. The substance is a strong base. It reacts violently with acid and is corrosive. Attacks many metals. This produces flammable/explosive gas (hydrogen - see ICSC 0001).

### 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: LD50 - rat (male) - 1 844 mg/kg bw.
- Inhalation: LC50 - rat (male/female) - > 1.707 mg/L air (nominal).
- Dermal: LD50 - rat (male/female) - > 2 000 mg/kg bw.

### 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 may cause lung oedema, but only after initial corrosive effects on eyes and/or airways have become manifest.

### STOT-repeated exposure

no data available

### Aspiration hazard

A harmful concentration of airborne particles can be reached quickly when dispersed.

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## SECTION 12: Ecological information

### Toxicity

Toxicity to fish: LC50 - *Lepomis macrochirus* - 15 400 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - > 10 000 mg/L - 48 h.

Toxicity to algae: EC50 - *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*) - ca. 22

000 mg/L - 96 h.

Toxicity to microorganisms: IC50 - activated sludge from domestic and industrial sewage treatment plants - > 1 000 mg/L - 3 h.

### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **Toxics Screening Level**

The ITSL for sodium methylate has been changed from 0.04 µg/m<sup>3</sup> to 0.1 µg/m<sup>3</sup> based on an annual averaging time.

### **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: UN1289 (For reference only, please check.)

IMDG: UN1289 (For reference only, please check.)

IATA: UN1289 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: SODIUM METHYLATE SOLUTION in alcohol (For reference only, please check.)

IMDG: SODIUM METHYLATE SOLUTION in alcohol (For reference only, please check.)

IATA: SODIUM METHYLATE SOLUTION in alcohol (For reference only, please check.)

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

ADR/RID: 3 (For reference only, please check.)



IMDG: 3 (For reference only, please check.)

IATA: 3 (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

Sodium methylate is a very reactive solid and is handled in solution in most cases. The solid is very hygroscopic and decomposes quickly. It is only stable under exclusion of air and moisture. Reacts violently with fire extinguishing agents such as water. Rinse contaminated clothing with plenty of water because of fire hazard. Other UN number is UN1289 Sodium methylate solution in alcohol, hazard class: 3, subsidiary risk: 8, packing group II-III.

### 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.