

## Chemical Safety Data Sheet MSDS / SDS

**Potassium bicarbonate**Revision Date:2023-11-29 Revision Number:1

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

Product name : Potassium bicarbonate  
CBnumber : CB3260704  
CAS : 298-14-6  
EINECS Number : 206-059-0  
Synonyms : Potassium bicarbonate,bicarbonate

**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****GHS Label elements, including precautionary statements**

Signal word : No signal word

**Hazard statement(s)**

none

**Prevention**

none

**Response**

none

**Storage**

none

**Disposal**

none

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**SECTION 3: Composition/information on ingredients**

## Substance

Product name	: Potassium bicarbonate
Synonyms	: Potassium bicarbonate,bicarbonate
CAS	: 298-14-6
EC number	: 206-059-0
MF	: CHKO3
MW	: 100.12

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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

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### Special hazards arising from the substance or mixture

Nature of decomposition products not known. Not combustible.

Ambient fire may liberate hazardous vapours.

### Advice for firefighters

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

### Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

#### NFPA 704



■ HEALTH 1 Exposure would cause irritation with only minor residual injury (e.g. [acetone](#), sodium bromate, potassium chloride)

■ 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.

## 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). 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

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 P1

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.

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	white granular
Odour	odorless
Odour Threshold	No data available d) pH 8,2 at 10,01 g/l Melting point/freezing point Initial boiling point and boiling range Decomposes before melting. 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 No data available Water solubility 362 g/l at 25 °C Partition coefficient: n-octanol/water Autoignition temperature Decomposition temperature No data available No data available 100 °C - Decomposes before melting. 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	Decomposes before melting.
Initial boiling point and boiling range	292 °C
Flash point	No data available
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	No data available
Water solubility	362 g/l at 25 °C
Partition coefficient: n-octanol/water	H <sub>2</sub> O: 1 M at 20 °C, clear, colorless
Autoignition temperature	No data available
Decomposition temperature	100 °C - Decomposes before melting.
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 $A_{\max}$ : 0.010 $\lambda$ : 280 nm $A_{\max}$ : 0.01

### Other safety information

No data available

## SECTION 10: Stability and reactivity

### Reactivity

No data available

## Chemical stability

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

## Possibility of hazardous reactions

Violent reactions possible with:

Strong acids

Possible formation of:

carbon dioxide

## 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 - > 2.000 mg/kg (OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 5,07 mg/l (OECD Test Guideline 403)

LD50 Dermal - Rabbit - > 2.000 mg/kg (OECD Test Guideline 402)

### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation (Patch Test 24 Hrs.) Remarks: No data available

### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Mild eye irritation

### Respiratory or skin sensitization

Buehler Test - Guinea pig

Result: Did not cause sensitization on laboratory animals. (OECD Test Guideline 406)

### Germ cell mutagenicity

No data available

### Carcinogenicity

No data available

### 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: > 2000 mg/kg

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## SECTION 12: Ecological information

### **Toxicity**

#### **Toxicity to fish**

flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) -

1.300 mg/l - 96 h

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

static test EC50 - Daphnia - 630 mg/l - 48 h

### **Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

### **Bioaccumulative potential**

Does not bioaccumulate.

### **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.

### **Incompatibilities**

Potassium bicarbonate reacts with acids and acidic salts with the evolution of carbon dioxide.

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## SECTION 14: Transport information

**UN number**

ADR/RID: - IMDG: - IATA: -

**UN proper shipping name**

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

**Transport hazard class(es)**

ADR/RID: - IMDG: - IATA: -

**Packaging group**

ADR/RID: - IMDG: - IATA: -

**Environmental hazards**

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

**Special precautions for user****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**

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

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

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

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>

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

EC Inventory:Listed.

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

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## SECTION 16: Other information

**Abbreviations and acronyms**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%



IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit

TWA: Time Weighted Average

## 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:

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.