

Safety Data Sheet according to Regulation (EC) no. 1907/2006

Trade name: **SODA (Ciech)**
Manufacturer/Supplier: Kuhmichel Abrasiv GmbH

Print date: 21/12/2023
Revised on: 21/12/2023



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

- 1.1 Product identifier**
Sodium hydrogen carbonate (Ciech)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
No information available
Use of the product
Mineral blasting abrasive for industrial use
- 1.3 Details of the supplier of the safety data sheet**
Manufacturer / supplier
Kuhmichel Abrasiv GmbH
Am Rosenbaum 22
40882 Ratingen, Germany
Competent person
Kerstin Knein
Phone / E-Mail
+49 2102 93979-27 / kerstin.knein@kuhmichel.com
- 1.4 Emergency telephone number**
+49 2102 93979-99

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture**
CLP Regulation (EC) No. 1272/2008
Not classified as hazardous according to CLP Regulation (EC) No. 1272/2008.
- 2.2 Label elements**
CLP Regulation (EC) No. 1272/2008
Pictogram and signal word of the product
Does not require labelling under the CLP Regulation (EC) No. 1272/2008.
Hazardous components for labelling (Product identifier)
Does not require labelling under the CLP Regulation (EC) No. 1272/2008.
Hazard statements
None
Safety instructions
None
- 2.3 Other hazards**
None

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical characterisation	EINECS	CAS No.	REACH Registration No.	Ingredients (Mean values)	Classification according to CLP Regulation (EC) No. 1272/2008	
					Hazard classes / hazard categories	Hazard statements
Sodium hydrogen carbonate (NaHCO ₃)	205-633-8	144-55-8	01-2119457606-32	≥ 99 %	-/-	-/-

Registered substance listed on the so-called 'Candidate List of Substances of Very High Concern (SVHC) for authorisation' of the European Chemicals Agency (ECHA)

Hazardous ingredients

Does not contain dangerous ingredients

Substances with specified EC threshold values

Does not contain substances with EC exposure limits

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Section 4: First-aid measures

4.1. Description of first aid measures

General information

Consult a doctor in case of health disorders.

After inhalation

Provide the affected person with fresh air. Consult a doctor in case of irritation of the respiratory tract.

After skin contact

Wash with water and soap.

After eye contact

Remove contact lenses and rinse the eyes with open eyelids for 10 minutes under running water.

If necessary, consult an ophthalmologist.

After swallowing

Rinse mouth. If symptoms persist, immediately call a doctor or a treatment centre for poisoning cases.

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

None

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

Treat symptomatically

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Product does not burn. Match extinguishing measures to ambient situation.

Extinguishing media that must not be used

Not known

5.2 Special hazards arising from the substance or mixture

None

5.3 Advice for firefighters

Match fire-fighting measures to ambient situation.

Special protective equipment for firefighting

Wear self-contained respirator protective device. Use personal protective equipment.

Additional information

Not known

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation of dusts. Sweep up to prevent slipping. Prevent further leakage or spillage.

6.2 Environmental precautions

Prevent entering sewerage.

6.3 Methods and material for containment and cleaning up

Pick up dry and dispose of properly. Avoid dust formation.

6.4 Reference to other sections

Refer to protective measures in sections 7 and 8.

Additional information

Not known

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handling precautions

Ensure adequate ventilation. Avoid spillage and dust formation.

When filling/decanting, use closed apparatus if possible.

For safety reasons, it is recommended to use a protective sieve during filling.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Additional advice

Not known

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7.2 Conditions for safe storage, including any incompatibilities

Information on storage conditions

Store product in a dry place and protected from moisture.

Requirements for storage facilities and containers/vessels

Keep dry, tightly sealed and in correct labelled containers. Keep away from incompatible products.

VCI storage class

LGK 10-13 (other liquids and solids)

7.3 Specific end use(s)

Sodium hydrogen carbonate is not intended for pharmaceutical and feed/food applications.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values in the workplace and/or biological limit values in Germany

Dust limits	CAS	MAK value mg/m ³		Spzbg
		inhalable fractionl (E) ¹ mg/m ³	respirable fraction (A) ¹ mg/m ³	
General dust limit	-	4	0,3	-

¹ If no value is given, the general dust limit value with exceedance factor 2 applies.

Community exposure limits

Country specific. Please inquire in individual cases.

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over the use of personal protective equipment. Provide adequate ventilation. This can be achieved by local suction or general air extraction.

Sodium hydrogen carbonate is a hazardous substance that does not have its own dust limit value, thus only the general dust limit value applies.

Suitable assessment methods to verify the effectiveness of the protective measures taken include metrological and non-metrological determination methods as described in the Technical Rules for Hazardous Substances (TRGS) 402 and BS EN 14042.

Personal protective equipment

The use of personal protective equipment is dependent on the concentrations and quantity of hazardous substances in their execution in specific workplaces.

Respiratory protection

Use respiratory protection with dust filter during blasting applications. Recommended Filter Type: P1

Hand protection

Glove material: leather

Eye protection

Tight-sealing protective eyewear (dust-protection goggles) like NIOSH (US) or EN 166 (EC).

Body protection

With normal use, no body protection by half or full-body coverall and boots is required.

Information on industrial hygiene

Minimum standards for protective measures when handling working materials are listed in TRGS 500.

Do not eat, drink, smoke or take drugs while using this product.

Avoid contact with skin, eyes and clothing.

Remove soiled or soaked clothing immediately.

Wash hands before breaks and at end of work.

Protect skin by using skin creams.

Observe the usual precautions when handling chemicals.

Environmental protection measures

Dispose flush water in accordance with local and national regulations.

See sections 6 and 7; no further action is required.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Colour	white
Odour	odourless
Melting point / freezing point	no applicable (decomposition from 50 °C)
Boiling point or initial boiling point and boiling range	no applicable (decomposition from 50 °C)
Flammability	not applicable (non-flammable inorganic salt)
Lower and upper explosion limit	not applicable (non-flammable/explosive inorganic salt)
Flash point	not applicable (non-flammable inorganic salt)
Auto-ignition temperature	not determined as product is not flammable
Decomposition temperature	> 50 °C (Release of CO ₂ and H ₂ O) decomposition of Na ₂ CO ₃ at 270 °C
pH	8.4 (at 93.4 g/l; 20 °C)
Kinematic viscosity	not applicable (solid inorganic salt)
Solubility	93.4 g/l (in water at 20 °C)
Partition coefficient n-octanol/water (log value)	not applicable (inorganic salt)
Vapour pressure	not applicable (inorganic salt)
Density and/or relative density	2.21 - 2.23 at 20 °C
Relative vapour density	not relevant
Particle characteristics	not relevant

9.2 Other information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Violent reaction with acids. (Decomposition with release of CO₂).

10.2 Chemical stability

Sodium bicarbonate is chemically stable and does not change if handled and stored properly.

10.3 Possibility of hazardous reactions

No hazardous reactions known

10.4 Conditions to avoid

Humidity (fabric is hygroscopic), temperatures above 50 °C.

10.5 Incompatible materials

Materials made of aluminium and zinc.

10.6 Hazardous decomposition products

None (Decomposition products are carbon dioxide, sodium oxides.)

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Does not require labelling under the CLP Regulation (EC) No. 1272/2008.

Acute toxicity

oral: LD₅₀ - not clearly determinable

inhalation: LC₅₀ - not clearly determinable

dermal: LD₅₀ - not clearly determinable

Corrosive/irritant to skin

None

Serious eye damage/eye irritation

None

Respiratory/skin sensitisation

No sensitizing / allergenic effects known or expected

Germ cell mutagenicity

No mutagenic effects known or expected

Carcinogenicity

No carcinogenic effects known or expected

Reproductive toxicity:

No reproductive toxic effect known or expected.

Specific target organ toxicity – single exposure

No target organ toxicity known or expected

Specific target organ toxicity – repeated exposure

No target organ toxicity known or expected

Aspiration risk

No aspiration risk known or expected

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11.2 Information on other hazards

Summary/Conclusions

In normal use, systemic availability of NaHCO_3 is not expected, since neither the concentration of Na^+ in the blood nor the pH-value of the blood is increased. Toxicity studies do not allow a definite statement on LD_{50} values, since toxicity depends mainly on the acid-base balance of the respective organism. Studies with rats showed LD_{50} values of > 4000 up to > 7334 mg/kg body weight, which indicates a low toxicity potential. Reproductive and developmental toxicity studies in rabbits, rats and mice were negative. Carcinogenicity and mutagenicity tests were also negative and carcinogenic or genotoxic effects are also not expected due to the substance structure. Based on the physicochemical properties, physiological function and toxicological properties, it is assumed that NaHCO_3 does not cause systemic effects.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Toxicity

Acute aquatic toxicity (Fishes): $\text{LC}_{50} = 7100$ mg/l (Lepomis macrochirus - 96 hours test)
Acute aquatic toxicity (Crustacean): $\text{EC}_{50} = 4100$ mg/l (Daphnia magna - 48 hours test)
Chronic toxicity: not applicable

12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Not applicable

12.4 Mobility in soil

Not applicable

12.5 Results of PBT and vPvB assessment

The substance in this product does not meet the criteria for classification as PBT or vPvB.

12.6 Endocrine disrupting properties

Not known

12.7 Other adverse effects

Not known, see Summary/Conclusions

Summary/Conclusions

The use of NaHCO_3 can potentially lead to emission, predominantly to the aquatic environment, causing a local increase in pH, which will however never be higher than 8.34. NaHCO_3 is an inorganic and highly water-soluble salt that occurs in nature in widely varying concentrations. Furthermore, NaHCO_3 is not absorbed by solid materials or surfaces and does not accumulate in the tissues of living organisms. The effect of NaHCO_3 depends essentially on the buffering capacity of the aquatic or terrestrial ecosystem. Therefore, the determination of chronic toxicity, mobility in soil, PNECs, PBT/vPvB properties or bioaccumulation potential is not necessary or possible.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Substance

Sodium hydrogen carbonate. If recycling is not possible, waste must be disposed of in compliance with national and local regulations. Confirm the exact waste code with the disposer.

13.2 Packaging

National and local regulations must be followed.

SECTION 14: Transport information

14.1 UN number or ID number

No dangerous goods

14.2 UN proper shipping name

ADR/RID

No dangerous goods

IMDG-Code / ICAO-TI / IATA-DGR

No dangerous goods

14.3 Transport hazard class(es)

ADR / RID / IMDG-Code / GGVSee / ICAO-TI / IATA-DGR

No dangerous goods

14.4 Packing group

No dangerous goods

14.5 Environmental hazards

Label environmentally hazardous substances

ADR / RID / IMDG-Code: no

ICAO-TI / IATA-DGR: no

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14.6 Special precautions for user
see Section 6 to 8

14.7 Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulations

Sodium hydrogen carbonate is not subject to the Regulation 722/2012/EU (ADI-Free).

Admission according to title VII of the REACH Regulation (EC) No. 1907/2006

None

Restrictions according to title VIII of the REACH Regulation (EC) No. 1907/2006

None

Labelling requirements according to CLP Regulation (EC) No. 1272/2008

No labelling required

National regulations

Water hazard class

Water hazard class 1, slightly hazardous to water according to AwSV (Substance no. 374)

Technical instruction on air quality (TA-Luft)

Substance not mentioned by name.

Hazardous Incident Ordinance (12. BImSchV [German Federal Immission Control Regulation])

Substance not mentioned by name.

Solvents Ordinance (31. BImSchV [German Federal Immission Control Regulation])

Substance not mentioned by name.

Chemicals Prohibition Ordinance

Substance not mentioned by name.

Relevant Technical Rules for Hazardous Substances

Contains no hazardous substances.

Employment Restrictions

Not known

Miscellaneous

Sodium hydrogen carbonate is not subject to the VOC Regulation.

15.2 Chemical safety assessment

Carried out according to Regulation 1907/2006/EC.

SECTION 16: Other information

Further applicable EC directives

Not known

Restrictions on use recommended by the manufacturer

For industrial application only.

Other notices

The product information in this safety data sheet is correct to the best of our knowledge at the time of printing. The information is intended to provide you with advice on the safe handling of the product mentioned in this safety data sheet for storage, processing, transport and disposal. The information cannot be applied to other products. If the product mentioned in this safety data sheet is in any way tampered with i.e. mixed with other materials, processed or undergoes processing, the information as supplied in this document no longer applies to the new product unless expressly stated otherwise.

Amendments compared with the last version

21/12/2023 Adjustments according to Regulation (EU) 2020/878, Revision of MAK values

Literature and data sources

Regulations

REACH Regulation (EC) No. 1907/2006

CLP Regulation (EC) No. 1272/2008

Hazardous Substances Ordinance (GefStoffV)

Commission Decision 2000/532/EC (AVV)

Transport Regulations according to ADR, RID and IATA

TRGS 900

VOC Regulation (ChemVOCFarbV)

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Hazard statements, referred to in section 2 and 3 according to Regulation (EC) No. 1272/2008
None

Methods according to article 9 of the CLP Regulation (EC) No. 1272/2008 for evaluation of the information used for classification
Not applicable

The above information is based on the present state of knowledge; however, this shall not constitute a guarantee of product properties and establishes no contractual legal rights. Existing laws and regulations must be strictly followed by the recipient or user of the blasting medium on their own responsibility.

Legend

ADR	European agreement concerning the international carriage of dangerous goods by road
AVV/EWC	European Waste Catalogue
AwSV	Administrative Regulation on Substances Hazardous to Water (German)
BImSchV	Regulation on the Implementation of the (German) Federal Immission Control Ordinance
CAS	Chemical Abstracts Service
DGUV	German statutory accident insurance
EC	European Community
EN	European Standard
GefStoffV	Hazardous Substances Ordinance
GGVSee	Regulation on the transportation of dangerous goods by sea
IATA-DGR	International Air Transport Association-Dangerous Goods Regulations
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	International Civil Aviation Organization-Technical Instructions
IMDG-Code	International Maritime Code for Dangerous Goods
IMO	International Maritime Organization
MAK	Maximum workplace concentration
PBT	persistent, bioaccumulative, toxic
RID	Regulations concerning the International Carriage of Dangerous Goods
Spzbg	Peak Limitation Category (Exceedance Factor)
TRGS	Technical Rules for Hazardous Substances
UN	United Nations
Us	United States
VOC	Volatile Organic Compounds (VOCs)
vPvB	very persistent and very bioaccumulative
WGK	Water hazard class