Chemical Safety Data Sheet

SECTION 1 IDENTIFICATION

Product Name: Sodium Bicarbonate
Synonyms: Sodium Hydrogen Carbonate; Baking Soda; Bicarbonate of Soda
CAS No.: 144-55-8
EC No.: 205-633-8
Molecular Formula: $NaHCO_3$
Molecular Weight: 84.01 g/mol
Recommended Use: Industrial and food grade alkaline raw material. Used in food processing, pharmaceuticals, fire extinguishing agents, water treatment, and chemical manufacturing.
Restrictions on Use: /
Supplier / Manufacturer: Shandong Guowei Chemical Industry Co., Ltd.
Address: Binhai Economic Development Zone, Weifang, Shandong, China
TEL: (86)5365336889
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SECTION 2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Not a hazardous substance or mixture (GB 30000-2013).

GHS Label Elements, Including Precautionary Statements

Not a hazardous substance or mixture. No signal word, hazard statements or pictograms required.

Physical and Chemical Hazards

Based on currently available information, no physical or chemical hazards have been identified.

Health Hazards

Based on currently available information, no health hazards have been identified.

Environmental Hazards

Based on currently available information, no environmental hazards have been identified.

Emergency Overview

White crystals, odourless. If inhaled, move the patient to fresh air. If breathing stops, perform artificial respiration. Wash with soap and large amounts of water. As a precaution, rinse eyes with water. Never give anything by mouth to an unconscious person. Rinse mouth with water.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Sodium Bicarbonate
CAS No.	144-55-8
EC No.	205-633-8
Content	≥99%

SECTION 4 FIRST AID MEASURES

Description of Necessary First Aid Measures

If inhaled: Move the patient to fresh air immediately. If breathing stops, perform artificial respiration. Seek medical attention.

In case of skin contact: Flush with large amounts of soap and water.

In case of eye contact: Flush thoroughly with large amounts of water for at least 15 minutes.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water.

Rescuer Protection

Use protective equipment. Avoid inhaling dust.

Most Important Symptoms and Effects

Mild irritation to skin and eyes on contact. Symptoms may be delayed.

Indication of Immediate Medical Attention Needed

Treat symptomatically. Note that symptoms may appear with a delay.

SECTION 5 FIREFIGHTING MEASURES

Suitable Extinguishing Media

Water spray, alcohol-resistant foam, dry powder, or carbon dioxide.

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Special Hazards Arising from the Chemical

No special flammable or explosive properties.

Special Protective Actions for Fire-Fighters

Wear appropriate protective equipment when fighting fires.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Avoid generating dust. Avoid inhaling vapours, aerosols, or gases.

Environmental Precautions

If safe to do so, take measures to prevent further leakage or spill.

Methods and Materials for Containment and Cleaning Up

Sweep and shovel up. Place into suitable, sealed containers for disposal.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling

Operators should wear a self-priming filter-type dust respirator and chemical safety goggles. Avoid generating dust. Handle with care during transport to prevent damage to packaging and containers.

Conditions for Safe Storage, Including Any Incompatibilities

Store in a cool location. Keep containers tightly sealed and store in a dry, well-ventilated area.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Index	Value
Occupational Exposure Limit	No known national regulatory exposure limits.
Monitoring Method	Acid-base titration; flame photometry.

Appropriate Engineering Controls

Closed operation. Ensure that eyewash stations and shower facilities are available near the workplace.

Personal Protective Equipment

- **Respiratory protection:** Dust respirator.
- **Eye/face protection:** Dust-proof safety goggles.
- **Skin and body protection:** Wear protective working clothing.
- **Hand protection:** Wear protective gloves.
- **Other protection:** No smoking, eating, or drinking in the workplace. Shower and change clothing after work. Maintain good hygiene habits.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White solid
Odour	No distinctive odour
Odour Threshold	/
pH Value	/
Melting Point / Freezing Point (°C)	270 (decomposes)
Boiling Point (°C)	/
Flash Point (°C)	Not applicable
Upper/Lower Flammability Limits (% V/V)	/
Vapour Pressure (kPa)	/
Vapour Density (Air = 1)	/
Relative Density (Water = 1)	2.2
Water Solubility	Soluble in water; slightly soluble in ethanol. Aqueous solution is mildly alkaline due to hydrolysis.
Partition Coefficient (n-octanol/water)	/
Autoignition Temperature (°C)	/
Decomposition Temperature (°C)	/
Evaporation Rate	/
Critical Temperature (°C)	Not applicable
Critical Pressure (MPa)	Not applicable
Molecular Formula	$NaHCO_3$
Molecular Weight (g/mol)	84.01

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SECTION 10 STABILITY AND REACTIVITY

Reactivity

No specific reactivity hazards known.

Chemical Stability

Stable under correct conditions of use and storage.

Possibility of Hazardous Reactions

None.

Conditions to Avoid

Moist air, heat sources.

Incompatible Materials

Strong oxidising agents, strong acids.

Hazardous Decomposition Products

In the event of fire, may decompose to produce harmful substances: carbon oxides, sodium oxide.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute Health Effects

Parameter	Value / Description
Oral LD50	4,220 mg/kg (rat, oral)
Skin irritation	Mild skin irritation — 3 days (human)
Eye irritation	Mild eye irritation — 30 seconds (rabbit)

Chronic Health Effects

Respiratory / Skin Sensitisation	/
Germ Cell Mutagenicity	/
Carcinogenicity	/
Reproductive Toxicity	/
STOT — Single Exposure	/
STOT — Repeated Exposure	/

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Aspiration Hazard	/

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity	/
Persistence and Degradability	/
Bioaccumulative Potential	/
Mobility in Soil	/

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal Methods

Transfer residual and non-recyclable material to a licensed disposal company.

Contaminated Packaging

Dispose of as unused product. Return to supplier for recycling where possible.

Special Precautions for Disposal

Consult national and local regulations before disposal. Do not dispose of indiscriminately.

SECTION 14 TRANSPORT INFORMATION

UN Number	Not regulated as dangerous goods
UN Proper Shipping Name	Not regulated as dangerous goods
Transport Hazard Class(es)	/
Packaging Group	/
Packaging Method	Package in accordance with manufacturer's recommendations.
Environmental Hazards	No.
Special Precautions for User	Packaging must be complete before shipping; loading must be stable. Ensure containers do not leak, collapse, fall, or sustain damage during transit. Must not be co-loaded with oxidising agents or acids. Protect from sunlight, rain, and high temperatures during transport.

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SECTION 15 REGULATORY INFORMATION

Regulations

This compound is not listed under applicable regulatory legislation.

This safety data sheet is prepared in accordance with GB/T 16483-2008 and GB/T 17519-2013. Chemical classification is based on the Hazardous Chemicals Catalogue (2015 Edition) Implementation Guide (Trial) and the GB 30000.2-2013 ~ GB 30000.29-2013 series standards.

SECTION 16 OTHER INFORMATION

References

GB/T 16483-2008; GB/T 17519-2013; GB 30000 series standards.

Form Date

June 2026

Abbreviations

Abbreviation	Full Name
LD50	Lethal Dose 50%
STOT	Specific Target Organ Toxicity
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
SDS	Safety Data Sheet
MAC	Maximum Allowable Concentration
PC-TWA	Permissible Concentration — Time-Weighted Average
PC-STEL	Permissible Concentration — Short-Term Exposure Limit

Disclaimer

The format of this Safety Data Sheet complies with the requirements of GB/T 16483 and GB/T 17519. The data originates from internationally authoritative databases and information submitted by the enterprise; other information is based on the company's current knowledge. Every effort has been made to ensure the accuracy of the information. However, due to the diversity of information sources and limitations of the company's knowledge, this document is provided for reference only. Users of this SDS should exercise their own judgement as to the suitability of the information for their particular purposes. We accept no liability for any damage arising from operation, storage, use, or disposal of this product.