SAFETY DATA SHEET

Product Name: Sodium Bicarbonate ($NaHCO_3$)
According to GB 1886.2-2015, GB/T 16483-2008, GB/T 17519-2013

Initial compilation date: 25 October 2023

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Version: 1.0

SECTION 1: Identification of the Substance/Mixture and of the Company/Undertaking

Item	Details
Product name	Sodium Bicarbonate
Manufacturer/Supplier	Shanghai Dingwujin Chemical Co., Ltd.
Address	No. 12, Lane 199, Yefan Road, Yexie Town, Songjiang District, Shanghai, China
Telephone	+86 158 4002 8423
E-mail	dwjchem@dwjchem.com
Recommended use	Industrial use: food additive, feed additive, flue gas desulfurization, rubber foaming agent, detergent builder, water treatment and pharmaceutical applications.
Restrictions on use	No other specific restrictions identified.

Emergency telephone: China 24-hour chemical accident emergency consultation: +86 158 4002 8423

For more information, contact: Shanghai Dingwujin Chemical Co., Ltd.

SECTION 2: Hazards Identification

2.1 Emergency overview

White crystalline solid. Not a hazardous substance or mixture; non-flammable.

2.2 GHS classification

According to the General Rules for Classification and Hazard Communication of Chemicals (GB 13690-2009) and the relevant standards for classification, labeling and precautionary statements of chemicals:

- Physical hazards: Not classified.
- Health hazards: Not classified.

Skin corrosion/irritation: Not classified.

Serious eye damage/eye irritation: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

• Environmental hazards: Not classified.

2.3 Label elements

• Pictograms: None required.

• Signal word: No signal word.

• Hazard statements:

• None required (the substance/mixture is not classified as hazardous).

• Precautionary statements – Prevention:

• P260 Do not breathe dust/fume.

• P264 Wash hands thoroughly after handling.

• P270 Do not eat, drink or smoke when using this product.

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

• Precautionary statements – Response:

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

• P312 Call a POISON CENTER/doctor if you feel unwell.

• P302+P352 IF ON SKIN: Wash with plenty of water.

• P332+P313 If skin irritation occurs: Get medical advice/attention.

• P362+P364 Take off contaminated clothing and wash it before reuse.

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

• P337+P313 If eye irritation persists: Get medical advice/attention.

• P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

• P330 Rinse mouth.

- P314 Get medical advice/attention if you feel unwell.

• Precautionary statements – Storage: No special requirements. Store in a cool, dry and well-ventilated place.

• Precautionary statements – Disposal: P501 Dispose of contents/container in accordance with local/national regulations.

2.4 Other information

Physical and chemical hazards: Non-flammable; no fire or explosion hazard. When heated to decomposition it emits acrid smoke and irritating fumes. Reacts with acids to form carbon dioxide.

Health hazards: Slightly hazardous in case of skin contact (irritant), eye contact (irritant), ingestion or inhalation. High concentrations of dust may cause coughing and sneezing; extremely large oral doses may cause gastrointestinal disturbances.

Environmental hazards: No information found on environmental fate or ecotoxicity.

Other hazards: No relevant information.

SECTION 3: Composition/Information on Ingredients

Substance (√) Mixture ( )

Component name	CAS No.	Weight (%)
Sodium bicarbonate	144-55-8	99 – 100

SECTION 4: First Aid Measures

If the product causes harm to human health during use, consult a physician or a professional. Specific measures are as follows:

• Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

• Skin contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

• Eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

• Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing. Get medical attention if symptoms appear.

Acute effects: Mild skin and eye irritation; coughing and sneezing from dust; gastrointestinal disturbance after very large oral doses.

Delayed effects: No relevant information.

Protection of first aiders: Use appropriate protective equipment in case of possible exposure (see Section 8).
Notes to physician: Treat symptomatically.

SECTION 5: Firefighting Measures

Suitable extinguishing media: Non-flammable product; no specific requirements. Use extinguishing media appropriate to the surrounding fire.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance: Non-flammable; flash point and flammable limits are not applicable. When heated to decomposition it emits acrid smoke and irritating fumes.

5.1 Firefighting precautions and protective measures

Small fire: Use extinguishing media appropriate to the surrounding fire.

Large fire: Use extinguishing media appropriate to the surrounding fire. Move containers from the fire area if safe to do so.

Special firefighting methods: None.

Protective equipment for firefighters: Firefighters should wear self-contained breathing apparatus and protective firefighting clothing.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal protective equipment: refer to Section 8.

Emergency procedures: Use appropriate tools to collect the spilled solid; avoid raising dust. Wear protective gloves, goggles and a dust respirator.

6.2 Environmental precautions

Do not allow the product to be released into the environment. Comply with local and national laws and regulations.

6.3 Methods and material for containment and cleaning up

Small spill: Use appropriate tools to put the spilled solid into a convenient waste disposal container, then clean the contaminated surface with water. Large spill: Use a shovel to collect the material into a waste disposal container and clean the surface with water. Dispose of in accordance with local and regional regulations.

SECTION 7: Handling and Storage

7.1 Handling

Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as acids. Provide adequate dilution ventilation and avoid dust generation. Wear protective gloves, chemical safety goggles and clean body-covering clothing. Empty containers may retain product residues.

7.2 Storage

Conditions for safe storage: Keep container tightly closed. Keep container in a cool, well-ventilated and dry area. Stable in dry air but slowly decomposes in moist air; protect from moisture.

Incompatible materials: Acids (reacts to form carbon dioxide); moisture; monoammonium phosphate and sodium-potassium alloy (dangerous reaction).

Packaging materials: Keep in the original, tightly closed packaging.

Other information: The warehouse should be equipped with appropriate spill collection equipment and fire-fighting equipment.

SECTION 8: Exposure Controls/Personal Protection

8.1 Occupational exposure limits

Chemical name	MAC (mg/m^3)	PC-TWA (mg/m^3)	PC-STEL (mg/m^3)	ACGIH TLV-TWA (mg/m^3)
Sodium bicarbonate (CAS: 144-55-8)	—	No airborne exposure limit established	—	No data available

(Reference standard: GBZ 2.1-2019)

Monitoring methods: No relevant information.

Biological limit values: No relevant data.

8.2 Engineering controls

Engineering controls: No airborne exposure limits have been established. In general, dilution ventilation is a satisfactory control for this substance; if conditions of use create discomfort, a local exhaust system should be considered.

8.3 Personal protective equipment (for operators)

• Hand protection: Wear general work protective gloves.



• Eye protection: Use chemical safety goggles. Maintain an eye wash fountain and quick-drench facilities in the work area.



• Respiratory protection: Where exposure to dust or mist is apparent, a half-face dust/mist respirator may be worn; for emergencies or unknown exposure levels use a full-face positive-pressure air-supplied respirator. Air-purifying respirators do not protect in oxygen-deficient atmospheres.



• Body protection: Wear general work protective clothing; avoid skin contact and wash after contact.



General hygiene measures: Change and wash work clothes promptly; observe good personal hygiene.

SECTION 9: Physical and Chemical Properties

Property	Value
Appearance	White crystalline solid (powder / granules)
Colour	White
Odour	Odourless
pH	Not available (1% solution in water)
Boiling point/range	Not available
Melting point/range	Not available (decomposes on heating)
Flash point	Not applicable
Flammability/explosion limits – lower (% v/v)	Not applicable
Flammability/explosion limits – upper (% v/v)	Not applicable
Relative density	2.159 (water = 1)
Vapour pressure	Not applicable
Relative vapour density	Not available
Solubility	Soluble in cold water; slightly soluble in alcohol. Solubility in water: 6.4–19.1 g/100 g solution at 0–100 °C
n-Octanol/water partition coefficient	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available; heated to decomposition emits acrid smoke and irritating fumes
Odour threshold	Not available
Evaporation rate	Not available
Viscosity	Not applicable
Particle characteristics	Crystalline solid / powder
Flammability (solid, gas)	Non-flammable

SECTION 10: Stability and Reactivity

Stability: The product is stable. Polymerization will not occur. Stable in dry air, but slowly decomposes in moist air.

Hazardous reactions: Reacts with acids to form carbon dioxide. Dangerous reaction with monoammonium phosphate or sodium-potassium alloy.

Conditions to avoid: Moisture and incompatible materials.

Materials to avoid: Acids, moisture, monoammonium phosphate, sodium-potassium alloy.

Hazardous decomposition products: When heated to decomposition, emits acrid smoke and irritating fumes; carbon dioxide.

SECTION 11: Toxicological Information

11.1 Toxicity data of the product

Component	CAS No.	LD_{50} /LC_{50}
Sodium bicarbonate	144-55-8	Acute oral toxicity LD50: 3,360 mg/kg (mouse)

Component	CAS No.	LD_{50} /LC_{50}
Sodium bicarbonate	144-55-8	Acute toxicity (oral) LD50: 3,360 mg/kg (mouse)

11.2 Classification of the product as a whole

Endpoint	Classification
Acute toxicity (oral)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/eye irritation	Not classified
Respiratory sensitization	Not classified
Skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
Specific target organ toxicity – single exposure	Not classified
Specific target organ toxicity – repeated exposure	Not classified
Aspiration hazard	Not classified
Effects on or via lactation	Not classified
Toxicokinetics, metabolism and distribution	No data available
Other health hazards	Slightly hazardous in case of skin contact (irritant), eye contact (irritant), ingestion or inhalation. High concentrations of dust may cause coughing and sneezing; extremely large oral doses may cause gastrointestinal disturbances. Repeated or prolonged ingestion or inhalation of large amounts may cause metabolic abnormalities and sodium retention.

SECTION 12: Ecological Information

Ecotoxicity: No information found on environmental toxicity.

Environmental fate: No information found.

Bioaccumulative potential: No information found.

Product as a whole: Not classified.

Mobility in soil: No data available.

Other adverse environmental effects: No data available.

Other information: No data available.

SECTION 13: Disposal Considerations

Disposal methods:

- Residues: Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Dispose of container and unused contents in accordance with federal, state and local requirements.

• Contaminated containers and packaging: Containers or packaging should be sent to a licensed waste disposal facility for recycling or disposal.

Disposal precautions: Processing, use or contamination of this product may change the waste management options; state and local disposal regulations may differ from federal regulations.

SECTION 14: Transport Information

DOT / IATA / ICAO / IMO / IMDG

Proper shipping name: Not regulated (not classified as dangerous goods for transport).

UN No.	Hazard class	Subsidiary risk	Packing group	Marine pollutant	EMS
Not applicable	Not applicable	Not applicable	Not applicable	No	Not applicable

Packing marks: Not applicable.

Special precautions: Not regulated for transport. Before transport, check that packaging is complete and the load is secure; protect from moisture, sunlight, rain and high temperature. Do not mix with acids.

SECTION 15: Regulatory Information

15.1 Domestic regulations

General Rules for Classification and Hazard Communication of Chemicals (GB 13690-2009): Not classified. This product is not a hazardous chemical.

Classification and packaging of dangerous goods for transport (GB/T 15098-2008): Not applicable.

List of Dangerous Goods (GB 12268-2012): Not applicable (UN No.: not applicable; the product is not a dangerous good).

Catalogue of Hazardous Chemicals (2015 Edition): This product is not a hazardous chemical. Please comply with the Regulations on the Safe Use of Chemicals in the Workplace and other local regulations.

Law of the People's Republic of China on Work Safety: Provisions on safe production and operation, emergency handling of accidents and legal liability shall be complied with.

Law of the People's Republic of China on Prevention and Control of Occupational Diseases: Provisions on preliminary prevention, protection and management during work, and diagnosis of occupational diseases may be referenced.

Environmental Protection Law of the People's Republic of China: Comply with relevant provisions in preventing and controlling environmental pollution.

15.2 International regulations

TSCA – Toxic Substances Control Act:

Component name	CAS No.	TSCA Inventory
Sodium bicarbonate	144-55-8	Listed (TSCA 8(b) inventory)

(EC) 1272/2008 Annex VI Table 3.1: Not applicable (component, classification and hazard code all not applicable).

Clean Water Act (CWA): Not applicable (reportable quantity, hazardous substance, priority pollutants and toxic pollutants all not applicable). Other classifications: DSCL (EEC) – not classified according to EU regulations; WHMIS (Canada) – not controlled.

Carcinogenicity-related regulations: Not classified by IARC; carcinogenic, mutagenic, teratogenic and developmental toxicity effects are not available. HMIS (U.S.A.): Health 1, Fire 0, Reactivity 0, Personal Protection E; NFPA: Health 1, Flammability 0, Reactivity 0. WHMIS (Canada): Not controlled; not classified according to EU regulations.

SECTION 16: Other Information

16.1 Disclaimer

The information above is provided in good faith as a guide to the appropriate precautionary handling of the material by properly trained personnel. Recipients must exercise their independent judgment in determining its appropriateness for a particular purpose; the company makes no representations or warranties, express or implied, including merchantability or fitness for a particular purpose.

16.2 References

GB 1886.2-2015, GB/T 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 12268-2012, GB/T 17519-2013, GB 30000.2-2013 ~ 30000.29-2013, Catalogue of Hazardous Chemicals (2015 Edition), and other regulatory documents.

16.3 Abbreviations

GHS – Globally Harmonized System of Classification and Labelling of Chemicals;

CAS – Chemical Abstracts Service;

EINECS – European Inventory of Existing Commercial Chemical Substances;

ACGIH – American Conference of Governmental Industrial Hygienists;

OSHA – Occupational Safety and Health Administration;

IARC – International Agency for Research on Cancer;

IMO – International Maritime Organization;

IMDG – International Maritime Dangerous Goods;

IATA – International Air Transport Association;

ICAO – International Civil Aviation Organization;

TSCA – Toxic Substances Control Act;

ECHA – European Chemicals Agency;

NITE-CHRIP – Japan National Institute of Technology and Evaluation – Chemical Risk Information Platform.

16.4 Document information

Item	Details
Latest SDS revision date	25 October 2023 (Revision Date of the source MSDS)
SDS version	1.0
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