Safety data sheet

ChemiPURE Sodium Bicarbonate, ≥99.5%

Product name ChemiPURE Sodium Bicarbonate, ≥99.5%	Catalog no. SBC10
Synonyms Sodium bicarbonate; sodium hydrogen carbonate; baking soda	SDS revision -
CAS no. 144-55-8	Format version / date 3 / 25 October 2026

01 PRODUCT AND COMPANY IDENTIFICATION

Product identifier	ChemiPURE Sodium Bicarbonate, ≥99.5%
Product code	SBC10 (1 kg)
CAS number	144-55-8
EC number	205-633-8
Recommended use	For research use only. Laboratory reagent for buffer preparation, pH adjustment, and analytical applications.
Supplier	EcoTech Biotechnology
Website	www.ecotechbiotech.com
Address	Universite Mah. İpekyolu Cad. Ata Teknokent Sitesi B Blok No: Z10, Yakutiye, Erzurum, Türkiye
Telephone	0090 544 327 34 97
SDS contact	info@ecotechbiotech.com
Emergency telephone	0090 544 327 34 97
Available	Monday-Saturday/08:00-20:00/GMT+3
Languages	Turkish/English
Outside these hours	Contact: info@ecotechbiotech.com

02 HAZARDS IDENTIFICATION

Classification	Not classified as hazardous according to Regulation (EC) No. 1272/2008 (CLP).
Label elements	No hazardous label elements required.
Symbols / pictograms	None
Signal word	None
Hazard statements	None
Precautionary statements - Prevention	Avoid generation and inhalation of dust. Wear suitable laboratory eye protection and gloves; wash hands after handling.
Precautionary statements - Response	Rinse exposed eyes or skin with water. Move to fresh air after dust inhalation. Seek medical advice if symptoms persist.
Other hazards	Dust may cause temporary mechanical eye or respiratory irritation. Contact with acids releases carbon dioxide.

Composition & response

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03 COMPOSITION / INFORMATION ON INGREDIENTS

Product name	ChemiPURE Sodium Bicarbonate, ≥99.5%
Synonyms	Sodium hydrogen carbonate; baking soda; sodium bicarbonate
Concentration	≥99.5% (purity)
Formula	NaHCO3
Molecular weight	84.01 g/mol
Mixture statement	Substance: sodium bicarbonate (CAS 144-55-8; EC 205-633-8), purity ≥99.5%. Remaining impurities are not specified.

04 FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact	Rinse cautiously with plenty of water for several minutes. Remove contact lenses if easy to do. Seek medical advice if irritation persists.
Skin contact	Rinse skin with water. Remove contaminated clothing. Obtain medical advice if irritation develops.
Inhalation	Move to fresh air. Seek medical attention if coughing or respiratory discomfort persists.
Ingestion	Rinse mouth. If conscious, drink a small amount of water. Do not induce vomiting. Seek medical advice if feeling unwell.
Self-protection of first aider	Avoid exposure to dust; use appropriate personal protective equipment.
Most important symptoms / effects	Dust may cause cough or temporary eye redness. Significant acute effects are not expected from normal laboratory use.
Notes to physicians	Treat symptomatically.

05 FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, foam, carbon dioxide or dry chemical suitable for the surrounding fire.
Unsuitable extinguishing media	No specific restrictions on extinguishing agents are established for this substance.
Special hazards arising from the substance or mixture	Non-combustible. On strong heating, decomposition may release carbon dioxide, water vapor and sodium oxides.
Explosion data	Not explosive and not flammable under normal conditions.
Advice for firefighters	Use standard protective clothing and self-contained breathing apparatus when fighting surrounding fires.

Safe use & protection

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06 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Provide adequate ventilation. Avoid generating or inhaling dust. Wear safety glasses, gloves and laboratory clothing.
Environmental precautions	Avoid release of large quantities to drains, surface water and soil.
Methods and materials for containment and cleaning up	Collect the dry material mechanically with minimal dust formation. Place in a suitable closed, labelled container.
Reference to other sections	See Sections 8 and 13.

07 HANDLING AND STORAGE

Precautions for safe handling	Avoid unnecessary dust formation and contact with eyes. Handle using good laboratory hygiene and suitable ventilation.
Conditions for safe storage	Store at room temperature in a tightly closed, dry container. Protect from moisture, acids and incompatible materials.
Container labeling	Keep in correctly labelled, tightly closed containers.

08 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

No substance-specific occupational exposure limits have been established for sodium bicarbonate.

8.2 Exposure controls

Engineering measures	Provide adequate general ventilation and local extraction where dust may be generated.
Hygiene measures	Wash hands after use. Do not eat, drink or smoke in the laboratory.
Eye / face protection	Wear suitable safety glasses or goggles conforming to EN 166.
Hand protection	Wear appropriate chemical-resistant protective gloves.
Skin and body protection	Wear a laboratory coat or appropriate protective clothing.
Respiratory protection	Normally not required with adequate ventilation. If dust exposure cannot be controlled, use an appropriate particulate respirator.

Material properties

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09 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White, fine crystalline powder (solid)
Odor	Odorless
Odor threshold	Not applicable (odorless)
pH	Approx. 8.6 (50 g/L aqueous solution, 20 °C)
Melting point / freezing point	Decomposes on heating; no sharp melting point under normal conditions
Initial boiling point and boiling range	Not applicable (decomposes before boiling)
Flash point	Not applicable (non-combustible solid)
Evaporation rate	Not applicable (solid)
Flammability (solid, gas)	Not flammable; non-combustible solid
Upper / lower flammability or explosive limits	Not applicable
Vapor pressure	Approx. 0.669 hPa (20 °C)
Vapor density	Not applicable (solid)
Relative density	Approx. 2.16 g/cm³
Solubility(ies)	Water: approx. 93.4 g/L at 20 °C
Partition coefficient: n-octanol / water	Not applicable to an inorganic substance
Auto-ignition temperature	Not applicable
Decomposition temperature	Decomposition starts above approx. 50 °C
Viscosity	Not applicable (solid)
Explosive properties	Not classified as explosive
Oxidizing properties	Not classified as oxidizing

10 STABILITY AND REACTIVITY

Reactivity	Reacts with acids, releasing carbon dioxide gas. Avoid uncontrolled reactions with incompatible chemicals.
Chemical stability	Stable under normal room-temperature conditions when dry and tightly closed.
Possibility of hazardous reactions	Reaction with acids releases carbon dioxide and may increase pressure in sealed systems.
Conditions to avoid	Excessive heating, moisture and contact with incompatible substances.
Incompatible materials	Acids, alkali metals, certain metal alloys and ammonium compounds.
Hazardous decomposition products	Carbon dioxide, water vapor and sodium oxides on strong heating or decomposition.

Health & environment

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11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Not classified for acute toxicity. Oral LD50 (rat): >4,000 mg/kg; inhalation LC50 (rat, 4.5 h): >4.74 mg/L (dust/mist).
Skin corrosion / irritation	Not classified; mild irritation may occur during prolonged contact.
Serious eye damage / eye irritation	Not classified; airborne powder may cause transient mechanical eye irritation.
Carcinogenicity	No data available to establish a carcinogenicity classification.
Reproductive toxicity	No data available to establish a reproductive toxicity classification.
STOT - SE	Not classified; dust may cause temporary respiratory discomfort.
STOT - RE	No data available for a repeated-exposure classification.
Aspiration hazard	Not applicable to a solid substance.

11.2 Potential health effects

Ingestion: Excessive intake may cause gastrointestinal discomfort.
Inhalation: Airborne dust may cause coughing.
Skin: Mild transient irritation may occur.
Eyes: Dust may cause redness or mechanical irritation.

11.3 Additional information

No additional toxicological information available.

12 ECOLOGICAL INFORMATION

Ecotoxicity	Not classified as hazardous to the aquatic environment. Avoid excessive discharges that could alter water pH.
Persistence and degradability	Inorganic salt; biodegradation is not applicable.
Bioaccumulative potential	No data available; substantial bioaccumulation is not expected for this inorganic substance.
Mobility in soil	Readily soluble in water and may migrate with water.
Results of PBT and vPvB assessment	Not considered a PBT or vPvB substance.

13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Dispose of unused material according to local and national regulations using approved waste-management procedures. Avoid bulk discharge to drains.
Contaminated packaging	Dispose of contaminated packaging in accordance with local requirements. Recycle only after appropriate cleaning.

Transport & reference

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14 TRANSPORT INFORMATION

Mode	UN no.	UN proper shipping name	Hazard class	Packing group	Environmental hazards
ADR/RID	-	Not regulated	-	-	No
IMDG	-	Not regulated	-	-	No
IATA	-	Not regulated	-	-	No

15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation	Regulation (EC) No. 1907/2006 (REACH) and Regulation (EC) No. 1272/2008 (CLP). Sodium bicarbonate: CAS 144-55-8; EC 205-633-8. No hazardous CLP labelling required.
Environmental hazards	Not classified as hazardous to the aquatic environment under CLP.
Chemical safety assessment	No product-specific chemical safety assessment available.

16 OTHER INFORMATION

Key to abbreviations and acronyms

STOT-SE	Specific Target Organ Toxicity - Single Exposure
STOT-RE	Specific Target Organ Toxicity - Repeated Exposure
PBT	Persistent Bioaccumulative and Toxic
vPvB	very Persistent very Bioaccumulative and toxic
ADR	European Agreement concerning the international carriage of Dangerous goods by Road
CAS	Chemical Abstracts Service
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime code for Dangerous Goods
REACH	Registration, Evaluation, Authorization and restriction of Chemicals
RID	Regulations concerning the International transport of Dangerous goods by rail