



SAFETY DATA SHEET

PRODUCT NAME: SODIUM BICARBONATE

September 18

IDENTIFICATION

Product Name: Sodium Bicarbonate – Food Grade
Other Names: Sodium hydrogen carbonate; Baking soda; Bicarbonate of soda; Sodium bicarbonate FG grain.
Product Code: CSB25
Uses: Manufacture of effervescent salts and beverages, leavening agent, artificial mineral water, bath salt ingredient, pharmaceuticals, water softener, fire extinguishers, cleaning preparations, laboratory reagent, and stock feed buffer.
Supplier: HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Hamilton
Phone: 07 974 4971 Web: www.hamchem.nz Email: sales@hamchem.nz

- In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.
- In case of poisoning phone National Poisons Centre – 0800 764 766

HAZARD IDENTIFICATION

Emergency Overview: Not hazardous. Health injuries are not known or expected under normal use. Ecological injuries are not known or expected under normal use.

Controls applying to this substance: None, not hazardous.

Precautionary Statements: Avoid generating excessive dust. Do not breathe dust. If in contact with eyes, rinse thoroughly.

COMPOSITION & INFORMATION ON INGREDIENTS

Chemical Entity	CAS No.	Proportion (%)
Carbonic acid, monosodium salt	144-55-8	> 99%
Impurities		< 1%

FIRST AID MEASURES

Swallowed: Immediately give a glass of water. Do NOT induce vomiting. Keep up water intake for the next 24 hours (1/4 to 1/2 cup every hour for a child and 1 cup every hour for an adult). If large amounts have been swallowed or if in doubt, contact a Poison Centre or a doctor.

Eye: If this product comes in contact with eyes: Wash out immediately with water. If irritation continues, seek medical attention.

Skin: If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.

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Inhaled: If fumes or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary. If symptoms persist, call a doctor.

Notes to physician: Treat symptomatically.

FIRE FIGHTING MEASURES

Extinguishing media: In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions: water, water spray, dry powder, foam, carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons: None.

Hazards from Combustion Products: Carbon oxides.

Fire fighting: Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Use standard procedure for chemical fires. Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after use.

Fire/explosion hazard: Non-combustible material. Avoid generating dust, particularly clouds of dust in a confined or unventilated space. Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting. Combustion products include: carbon monoxide (CO), carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.

Fire incompatibility: Non-combustible material.

ACCIDENTAL RELEASE MEASURES

Minor spills: Clean up all spills immediately. Stop spill if safe to do so. Avoid contact with skin and eyes. Avoid generating dust. Pick up and transfer to properly labeled containers for disposal. After cleaning, flush away traces with water.

Major spills: Clear area of personnel. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact by using protective equipment. Prevent spillage from entering drains, sewers or water courses. Recover product wherever possible. Put residues in labeled plastic pails or other suitable sealed containers for disposal. If contamination of drains or waterways occurs, advise emergency services.

HANDLING & STORAGE

Procedure for handling: Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with skin and eyes. Keep containers closed until ready for use. Avoid dust formation.

Suitable container: Food Grade polyethylene coated paper bags, fibre drums or polyethylene/propylene big bags. Packing as recommended by manufacturer. Check all containers are clearly labeled and free from leaks.

Storage incompatibility: Avoid storage with mono-ammonium phosphate or sodium-potassium alloy. Avoid contamination, store away from Dangerous Goods and Toxic Substances.

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Storage requirements: Store tightly closed in dry, cool well-ventilated conditions out of direct sunlight. Observe manufacturer's storing and handling recommendations.

EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure standards: No value assigned for this specific material by WorkSafe New Zealand. However, Workplace Exposure Standard(s) for particulates: Nuisance dust: WES-TWA 10 mg/m³

Ventilation system: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

PERSONAL PROTECTION EQUIPMENT (PPE)

Personal respirators (NIOSH approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin protection: Wear impervious protective clothing, including gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

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

PHYSICAL & CHEMICAL PROPERTIES

Physical state:	Crystalline Powder
Colour:	White
Odour:	Odourless
Molecular Formula:	CH ₂ O ₃ .Na
Solubility in water:	Soluble in water.
Specific Gravity:	2.159 @20°C (compressed solid)
Flash Point (°C):	Not applicable
Flammability Limits (%):	Not applicable
Autoignition Temperature (°C):	Not available
Solubility in water (g/L):	96 @20°C
Melting Point/Range (°C):	Starts to decompose at 50°C
Decomposition Point (°C):	Starts at 50°C.
pH:	8.4 (1% aqueous solution)
Molecular weight:	84.01

STABILITY & REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY:

Product is stable under normal conditions of use, storage and temperature. Avoid excessive heat, moisture, incompatible materials. Reacts with acids to form carbon dioxide. Dangerous reaction with mono-ammonium phosphate dry chemical extinguishing agent. Moisture accelerates this reaction. Reacts

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violently with sodium-potassium alloy. Keep containers dry and tightly closed to avoid moisture absorption and contamination. No decomposition if stored under normal conditions of use. Thermal decomposition can lead to release of carbon dioxides. Hazardous polymerization will not occur.

TOXICOLOGICAL INFORMATION

ACUTE HEALTH EFFECTS

Swallowed: Health injuries are not known or expected under normal use. Large doses may cause gastrointestinal upsets, with large amounts of carbon dioxide being produced.

Eye: May cause mild irritation.

Skin: The material is not thought to produce adverse health effects or skin irritation following contact.

Inhaled: Inhalation of dust may cause coughing and irritation of the respiratory tract.

CHRONIC HEALTH EFFECTS

Chronic over-ingestion may cause metabolic alkalosis, cyanosis and hypernatremia. Not considered to be mutagenic, carcinogenic or a reproductive toxin.

TOXICITY AND IRRITATION

Toxicity: Not hazardous.

Oral LD₅₀ (rat) >5000 mg/kg.

Irritation: Mild irritation of eyes and respiratory tract.

Skin irritation/corrosion: Rabbit GLP study 40 CFR 798.4470: Slightly irritating

Eye irritation/corrosion: Rabbit EPA TSCA 40 CFR 798.4500 Draize test: Minimally irritating.

Irritating: (dose of 220mg).

ECOLOGICAL INFORMATION

Ecotoxicity:

48 hour EC₅₀ *Daphnia magna* (water flea): >1000 mg/l

96 hour LC₅₀ Rainbow Trout: >7,700 mg/l

48 hour LC₅₀ *Apis mellifera* (Honeybee): > 24µ/bee

Persistence and degradability: Inorganic compound, found naturally in the environment. The natural mineral form is known as nahcolite. Sodium bicarbonate will absorb moisture and gradually decompose into sodium carbonate, water and carbon dioxide.

Mobility: Sodium bicarbonate is present in the environment predominantly as sodium and bicarbonate ions in the aquatic environment.

Environmental Fate (exposure): Not expected to present adverse effects on the environment.

Bio accumulative potential: Will not accumulate in living tissues.

DISPOSAL CONSIDERATIONS

Recycle wherever possible. Consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. Dispose of by: burial in a licensed landfill or

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incineration in a licensed apparatus (after admixture with suitable combustible material). Empty contaminated packaging should be taken for local recycling, recovery or waste disposal.

TRANSPORT INFORMATION

Road and Rail Transport

Not classified as a Dangerous Good under NZS 5433:1999 Transport of Dangerous Goods on Land.

REGULATORY INFORMATION

Not classified as hazardous.

OTHER INFORMATION

End of SDS.

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