



Safety Data Sheet

Date of Issue: 01.12.2020

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1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
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Emergency phone number : 0800 243 622 (24 hours)

Product Name	Sodium Hydrogen Carbonate
Product Code	47101 , 47108
CAS No.	144-55-8

Recommended use : Laboratory Investigations

2: Hazards identification

STATEMENT OF HAZARDOUS NATURE

Classified as Non-Hazardous according to the criteria of the New Zealand Hazardous Substances and New Organisms legislation.

EMERGENCY OVERVIEW

Non-hazardous.

Health injuries are not known or expected under normal use.

Adverse ecological effects are not known or expected.

PRECAUTIONARY STATEMENTS

Avoid generating excessive dust.

Do not breathe dust.

If in contact with eyes, rinse thoroughly.

3: Composition/information on ingredients

NAME	CAS RN	%	HAZARDOUS
Sodium Bicarbonate	144-55-8	>90	No

4: First aid measures

SWALLOWED

- If ingested, rinse mouth with water.
- If large amounts have been swallowed or symptoms persist, contact a Poison Centre (0800 764 766) 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 the event of irritation.

INHALED

- Remove to fresh air. Other measures are usually unnecessary. If symptoms persist, call a doctor.

NOTES TO PHYSICIAN

- Treat symptomatically.

5: Firefighting measures

EXTINGUISHING MEDIA

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

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Use standard procedure for chemical fires.
- Clear fire area of all non-emergency personnel.
- Stay upwind. Eliminate ignition sources.
- Prevent spillage from entering drains or watercourses.
- 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 solid.

HAZARDS FROM COMBUSTION PRODUCTS

- Combustion products include carbon monoxide (CO), carbon dioxide (CO₂), sodium oxides and other pyrolysis products typical of burning organic material.

PERSONAL PROTECTIVE EQUIPMENT

- Firefighters should wear protective firefighting clothing (including firefighting helmet, coat, trousers, boots and gloves).

6: 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 labelled containers for disposal.
- After cleaning, flush away traces with water.

MAJOR SPILLS

- Clear area of personnel.
- Control personal contact by using protective equipment.
- Dampen product, if necessary, to avoid dissemination of the product.
- Prevent spillage from entering drains, sewers or water courses.
- Recover product wherever possible.
- Put residues in labelled plastic pails or other suitable sealed containers for disposal.
- If contamination of drains or waterways occurs, advise emergency services.
- Personal Protective Equipment advice is contained in Section 8 of the SDS

7: Handling and 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.
- Avoid contact with skin and eyes.
- Keep containers closed until ready for use.
- Avoid dust formation.

SUITABLE CONTAINER

- Polyethylene coated paper bags, fibre drums or polyethylene/propylene big bags.
- Original packaging.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

- Avoid storage with monoammonium phosphate or sodium-potassium alloy.
- Avoid contamination, store away from Dangerous Goods and Toxic Substances.

STORAGE REQUIREMENTS

- Store tightly closed in dry, cool, well ventilated conditions out of direct sunlight.
- Avoid high humidity

8: Exposure controls/personal protection

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³	Peak ppm	Peak mg/m ³	TWA F/CC
New Zealand WES 2016	inspirable dust	10						
New Zealand WES 2016	inspirable dust	3						

No exposure limits set by WorkSafe New Zealand or Safe Work Australia.

ENGINEERING CONTROLS

VENTILATION SYSTEM

Remove dust, as necessary. Refer to 'A simple guide to local exhaust ventilation' found on the WorkSafe New Zealand website.

PERSONAL PROTECTION EQUIPMENT (PPE)

PERSONAL RESPIRATORS

An approved dust mask e.g. a P1 respirator is recommended when using this product in dusty conditions. See Australian/New Zealand Standard, AS/NZS 1715:2009 and AS/NZS 1716:2012.

SKIN PROTECTION Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

EYE PROTECTION

Use chemical safety glasses and/or a full-face shield where splashing is possible. Maintain eye wash fountain in work area.

9: Physical and chemical properties

APPEARANCE

Powder/Crystalline, white.

PHYSICAL PROPERTIES

State	: Divided solid
Molecular Weight	: 84.01
Melting Range (°C)	: 50 (decomposition starts)
Boiling Range (°C)	: Not applicable
Solubility in water (g/L)	: 96
pH (1% solution, 25°C)	: ~8.4
pH (as supplied)	: Not applicable
Specific Gravity (water=1, 20°C)	: 2.208
Bulk Density (kg/m ³)	: ~900
Volatile Component (%vol)	: Not applicable
Relative Vapor Density (air=1)	: Not applicable
Vapour Pressure (kPa)	: Not applicable
Autoignition Temp (°C)	: Not available
Flash Point (°C)	: Not applicable
Lower Explosive Limit (%)	: Not applicable

Upper Explosive Limit (%) : Not applicable
Decomposition Temp (°C) : 100
Viscosity : Not applicable
Evaporation Rate : Not applicable

10: Stability and reactivity

CHEMICAL STABILITY

Product is stable under normal conditions of use, storage and temperature.

CONDITIONS TO AVOID

Avoid excessive heat, moisture, incompatible materials.

INCOMPATIBLE MATERIALS

Reacts with acids to form carbon dioxide. Dangerous reaction with monoammonium phosphate dry chemical extinguishing agent. Moisture accelerates this reaction. Reacts violently with sodium-potassium alloy. Incompatible with acids, acidic salts, aspirin and bismuth salicylate. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

HAZARDOUS DECOMPOSITION

Thermal decomposition can lead to release of carbon oxides.

HAZARDOUS REACTIONS

Hazardous polymerization will not occur.

11: 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 DATA

TOXICITY

Acute Oral Toxicity, Rat, LD50: >5000 mg/kg
Acute Dermal Toxicity, LD50: No data available.
Acute Inhalation Toxicity, LC50: No data available.

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).

Sensitisation (respiratory/contact): Not classified.

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Mutagenic effects: Not classified.

Reproductive or developmental effects: Not classified.

Aspiration hazard: Not available.

Specific target organ toxicity: Not classified.

12: Ecological information

ECOTOXICITY

Not considered to be a hazard to the environment.

ECOTOXICITY DATA

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.

Bioaccumulative Potential

Will not accumulate in living tissues.

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

14: Transport Information

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Not classified as a Dangerous Good under NZS 5433:2007 Transport of Dangerous Goods on Land.

15: Regulatory information

REGULATIONS

Non-hazardous.

Controls applying to this substance are:

None, not hazardous.

Carbonic acid monosodium salt, CAS 144-55-8 is listed on the following inventories:

NZIoC, TSCA, AICS, DSL, ENCS

Sodium Carbonates, Food Additive E500, is found on the following regulatory lists:

New Zealand - Australia New Zealand Food Standards Code - Food Additives - Schedule 8 Food additive names and code numbers.

New Zealand - Australia New Zealand Food Standards Code - Food Additives – Schedule 15

Substances that may be used as food additives.

CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP

Sodium bicarbonate is classified by the U.S. Food and Drug Administration (FDA) as a 'Generally Recognised as Safe' (GRAS) ingredient in food with no other limitation than current good manufacturing practice (FDA, 1978; FDA, 1983).

EU approved food additive (EU, 2000) and a feed ingredient (EU, 1998).

NEW ZEALAND POISON CENTRE 0800 POISON (0800 764 766) NZ EMERGENCY SERVICES: 111

Abbreviations:

ACGIH – American Conference of Governmental Industrial Hygienists.
ACVM – Agricultural Chemicals and Veterinary Medicines.
AICS – Australian Inventory of Chemical Substances.
AOX – Absorbable organic halogens.
APF – Assigned Protection Factor.
BOD – Biochemical Oxygen Demand.
China IECSC – Inventory of Existing Chemical Substances Produced or Imported in China.
COD – Chemical Oxygen Demand.
DSL – Canadian Domestic Substances List.
EINECS – European Inventory of Existing Commercial Chemical Substances.
ENCS – Japanese Existing and New Chemical substances.
GRAS – Generally Recognized as Safe
IARC – International Agency for Research on Cancer.
ISHL – Japanese Industrial Safety and Health Law List of Chemicals.
LOEL – Lowest Observed Effect Level.
LDLO – Lethal Dose Low (the lowest dosage per unit of bodyweight of a substance known to have resulted in fatality in a particular animal species).
NOEC – No Observed Effect Concentration.
NTP – National Toxicology Program.
NZIoC – New Zealand Inventory of Chemicals.
OECD HPV – The Organisation for Economic Co-operation and Development High Production Volume Chemicals.
PEL – Permissible exposure limit.
PPE – Personal Protective Equipment.
Prop 65 – California Proposition 65 List of Chemicals.
RTECS – Registry of Toxic Effects of Chemical substances.
STEL – Short term exposure limit.
TOC – Total Organic Carbon.
TSCA – US Toxic Substances Control Act Existing Chemicals.
TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.
VOC – Volatile Organic Compounds.

Sources of key data used to compile the datasheet:

Manufacturer's SDS
Australia New Zealand Food Standards Code

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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