

SODIUM PERCARBONATEMaterial Safety Data Sheet
Issue Date: 30-Sept-2019Version No: 11
Page 1 of 7

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
SODIUM PERCARBONATE**STATEMENT OF HAZARDOUS NATURE**

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

PROPER SHIPPING NAME
SODIUM CARBONATE PEROXYHYDRATE**PRODUCT USE**

■ Used according to manufacturer's directions.
Bleaching agent for industrial and domestic use; mild antiseptic; denture cleaner.

SUPPLIER

Company: Clark Chemicals
Address:
105 Niven Street Onekawa, Napier 4110
New Zealand
Telephone: +64 6 843 3163 Emergency Tel:
0800 243 622 Fax: +64 6 843 2958
Email: orders@clarkproducts.co.nz

Section 2 - HAZARDS IDENTIFICATION

GHS Classification

Eye Irritation Category 2A
Oxidizing Liquid Category 2

**EMERGENCY OVERVIEW****HAZARD**

DANGER
Gazetted by ERMENZ:
5.1.1B 6.4A
May intensify fire; oxidizer
Causes serious eye irritation

PRECAUTIONARY STATEMENTS**Prevention**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep/Store away from clothing and other combustible materials.
Take any precaution to avoid mixing with combustibles.
Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

SODIUM PERCARBONATE

Material Safety Data Sheet
Issue Date: 30-Sept-2019

Version No: 11
Page 2 of 7

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
sodium percarbonate	4452-58-8	>98
decomposes in water to produce hydrogen peroxide	7722-84-1	
sodium carbonate	497-19-8	

Section 4 - FIRST AID MEASURES

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

SWALLOWED

- IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.
- For advice, contact a Poisons Information Centre or a doctor.
- Urgent hospital treatment is likely to be needed.
- In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.

EYE

- If this product comes in contact with the eyes:
- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.

SKIN

- If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- For acute or short-term repeated exposures to highly alkaline materials:
 - Respiratory stress is uncommon but present occasionally because of soft tissue edema.
 - Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
 - Oxygen is given as indicated.
 - The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
 - Hydrogen peroxide at moderate concentrations (5% or more) is a strong oxidant.
 - Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered.
 - Because of the likelihood of systemic effects attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided.
 - There is remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation"
- Fisher Scientific MSDS.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- For hydrogen peroxide
- NOTE: Chemical extinguishing agents may accelerate decomposition. [CCINFO].
- FOR SMALL FIRE:
- USE FLOODING QUANTITIES OF WATER.
- DO NOT use dry chemical, CO₂, foam or halogenated-type extinguishers.
- FOR LARGE FIRE
- Flood fire area with water from a protected position.

FIRE/EXPLOSION HAZARD

- Will not burn but increases intensity of fire.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- Heat affected containers remain hazardous.
- Contact with combustibles such as wood, paper, oil or finely divided metal may produce spontaneous combustion or violent decomposition.
- Decomposition may produce toxic fumes of: metal oxides.

SODIUM PERCARBONATE

Material Safety Data Sheet
Issue Date: 30-Sept-2019

Version No: 11
Page 3 of 7

FIRE INCOMPATIBILITY

- Avoid storage with reducing agents.
- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous.

PERSONAL PROTECTION

Glasses:
Full face- shield.

Respirator:
Type B- P Filter of sufficient capacity

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Clean up all spills immediately.
- No smoking, naked lights, ignition sources.
- Avoid all contact with any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result.
- Avoid breathing dust or vapours and all contact with skin and eyes.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid personal contact and inhalation of dust, mist or vapours.
- Provide adequate ventilation.
- Always wear protective equipment and wash off any spillage from clothing.
- Keep material away from light, heat, flammables or combustibles.

SUITABLE CONTAINER

- Glass container is suitable for laboratory quantities.
- DO NOT use aluminium, galvanised or tin-plated containers.
- DO NOT repack. Use containers supplied by manufacturer only.

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- Where a can is to be used as an inner package, the can must have a screwed enclosure. <</>.

Hydrogen peroxide containing/ generating materials requiring rigid packaging.

Store in:

- containers with vented lids.
- properly passivated aluminium containers.
- properly passivated stainless steel.
- polyethylene containers.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed as supplied.
- Store in a cool, well ventilated area.
- Keep dry.

In addition, Goods of Class 5.1, packing group II should be:

- stored in piles so that
- the height of the pile does not exceed 1 metre
- the maximum quantity in a pile or building does not exceed 1000 tonnes unless the area is provided with automatic fire extinguishers
- the maximum height of a pile does not exceed 3 metres where the room is provided with automatic fire extinguishers or 2 meters if not.
- Material is hygroscopic, i.e. absorbs moisture from the air. Keep containers well sealed in storage.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	Notes
New Zealand Workplace Exposure Standards (WES)	hydrogen peroxide (Hydrogen peroxide)	1	1.4	A3 CARCINOGEN

The following materials had no OELs on our records

- sodium percarbonate: CAS:4452- 58- 8 CAS:15630- 89- 4
- sodium carbonate: CAS:497- 19- 8

PERSONAL PROTECTION

SODIUM PERCARBONATE

Material Safety Data Sheet
Issue Date: 30-Sept-2019

Version No: 11
Page 4 of 7

RESPIRATOR

Type B-P Filter of sufficient capacity

EYE

- Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber.
- Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
 - frequency and duration of contact,
 - chemical resistance of glove material,
 - glove thickness and
 - dexterity.
- DO NOT wear cotton or cotton-backed gloves.
- DO NOT wear leather gloves.
- Promptly hose all spills off leather shoes or boots or ensure that such footwear is protected with PVC over-shoes.
- Where hydrogen peroxide exposure may occur do NOT wear PVA gloves.
- DO NOT use leather or cotton gloves, leather shoes as spill may cause fire.
- Care: Effects may be delayed.
- Hand cream offers no protection for hydrogen peroxide and should not be used.

OTHER

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

ENGINEERING CONTROLS

- Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

- Material is hygroscopic, absorbs moisture from surrounding air.
- White microcrystalline powder; mixes with water. Soluble in hot water, partly soluble in cold water (120 g/l at 20 C). Oxidising agent.

PHYSICAL PROPERTIES

Solid.
Mixes with water.
Alkaline.

State	Divided solid	Molecular Weight	157.01
Melting Range (°C)	60	Viscosity	Not Available
Boiling Range (°C)	Not available	Solubility in water (g/L)	Miscible
Flash Point (°C)	Not applicable	pH (1% solution)	10
Decomposition Temp (°C)	Not available	pH (as supplied)	Not applicable
Autoignition Temp (°C)	Not applicable	Vapour Pressure (kPa)	Negligible
Upper Explosive Limit (%)	Not applicable	Specific Gravity (water=1)	2.5 approx
Lower Explosive Limit (%)	Not applicable	Relative Vapour Density (air=1)	Not applicable
Volatile Component (%vol)	Negligible	Evaporation Rate	Non Volatile

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable under normal handling conditions.
- Prolonged exposure to heat.
- Hazardous polymerisation will not occur.

Solutions of hydrogen peroxide slowly decompose, releasing oxygen, and so are often stabilised by the addition of acetanilide, etc.
For incompatible materials - refer to Section 7 - Handling and Storage.

SODIUM PERCARBONATE

Material Safety Data Sheet
Issue Date: 30-Sept-2019

Version No: 11
Page 5 of 7

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

EYE

- When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
- Corneal ulcerations due to hydrogen peroxide exposure may not appear for up to a week after exposure; concentrations above 10% are corrosive to the eye.

SKIN

- Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

INHALED

- The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS

- Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung.

Hydrogen peroxide as a human food additive is generally regarded as safe when used in certain limitations. In experimental animals, oral administration of hydrogen peroxide causes dental, liver, kidney, stomach, and intestinal damage.

Hydrogen peroxide added to food is affirmed to be generally regarded as safe (GRAS) by the U.S.

TOXICITY AND IRRITATION

- For sodium percarbonate:

Sodium percarbonate is an inorganic, water soluble solid of relatively low molecular weight. Dermal absorption is assumed to be low due to the hydrophilic character and the ionic structure of the substance.

CARCINOGEN

Hydrogen peroxide	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	3
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Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
hydrogen peroxide	LOW		LOW	HIGH
sodium carbonate	LOW		LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle where possible
Otherwise ensure that:
- licenced contractors dispose of the product and its container.
- disposal occurs at a licenced facility.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: OXIDIZING AGENT

SODIUM PERCARBONATE

Material Safety Data Sheet
Issue Date: 30-Sept-2019

Version No: 11
Page 6 of 7

HAZCHEM:

1Y

Land Transport UNDG:

Class or division: 5.1
Subsidiary risk: None
UN No.: 3378 UN
packing group: II Shipping Name: SODIUM CARBONATE
PEROXYHYDRATE

Air Transport IATA:

ICAO/IATA Class: 5.1 ICAO/IATA Subrisk: None
UN/ID Number: 3378 Packing Group: II
Special provisions: None

Shipping Name: SODIUM CARBONATE PEROXYHYDRATE

Maritime Transport IMDG:

IMDG Class: 5.1 IMDG Subrisk: None
UN Number: 3378 Packing Group: II
EMS Number: F- A , S- Q Special provisions: None
Limited Quantities: 1 kg

Shipping Name: SODIUM CARBONATE PEROXYHYDRATE

Section 15 - REGULATORY INFORMATION

NOTES

This substance should be managed in accordance with the requirements specified in the Cleaning Products (Oxidising [5.1.1]) Group Standard 2006, HSNO Approval Number HSR002590.

REGULATIONS

sodium percarbonate (CAS: 4452-58-8,15630-89-4) is found on the following regulatory lists;

"New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)"
Regulations for ingredients

hydrogen peroxide (CAS: 7722-84-1) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Air Transport Association (IATA) Dangerous Goods Regulations", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)", "OECD Representative List of High Production Volume (HPV) Chemicals"

sodium carbonate (CAS: 497-19-8) is found on the following regulatory lists;

"CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "International Council of Chemical Associations (ICCA) - High Production Volume List", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "OECD Representative List of High Production Volume (HPV) Chemicals"

Specific advice on controls required for materials used in New Zealand can be found at <http://www.ermanz.govt.nz/search/registers.html>

SODIUM PERCARBONATE

Material Safety Data Sheet
Issue Date: 30-Sept-2019

Version No: 11
Page 7 of 7

Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE: 0800 POISON (0800 764 766)
NZ EMERGENCYSERVICES: 111

Emergency response Number 0800 243 622

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the SDS Classification committee using a valuable literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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