

Revision date: 17-Sep-2024

Revision Number 2

## Section 1: Identification

### Product identifier

**Product Name** Reagent Ca-2

**Product Code(s)** 000000053803

### Other means of identification

### Recommended use of the chemical and restrictions on use

**Recommended use** Reagent.

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### **Supplier**

IXOM Operations Pty Ltd (Incorporated in Australia)  
 NZBN: 9429041465226  
 Street Address: 166 Totara Street  
 Mt Maunganui South  
 New Zealand

Telephone Number: +64 9 368 2700

Facsimile: +64 9 368 2710

### Emergency telephone number

**Emergency Telephone** 0 800 734 607 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## Section 2: Hazard identification

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

### GHS Classification

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

### Label elements



**Signal word**

Danger

**Hazard statements**

H290 - May be corrosive to metals

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

**Precautionary Statements - Prevention**

Keep only in original packaging.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash face, hands and any exposed skin thoroughly after handling.

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

Wear protective gloves/clothing and eye/face protection.

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS).

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

Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Absorb spillage to prevent material damage.

**Precautionary Statements - Storage**

Store locked up.

Store in corrosion resistant container with a resistant inner liner.

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

**Other hazards which do not result in classification**

No information available.

**Section 3: Composition/information on ingredients**

Chemical name	CAS No.	Weight-%
Sodium hydroxide	1310-73-2	<10%
Non hazardous component(s)	-	to 100%

**Section 4: First-aid measures****Description of first aid measures****General advice**

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Show this safety data sheet to the doctor in attendance.

**Emergency telephone number**

Poisons Information Center, New Zealand: 0800 764 766

**Inhalation**

Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.

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<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Get immediate medical attention.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	Irritation/Corrosion. May cause redness and tearing of the eyes. Can cause corneal burns. Erythema (skin redness). Burning.
<b>Effects of Exposure</b>	No information available.

**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Treat symptomatically. Can cause corneal burns.
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**Section 5: Fire-fighting measures**

<b>Hazchem code</b>	2R
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**Suitable Extinguishing Media**

<b>Suitable Extinguishing Media</b>	Dry chemical, CO2, water spray or regular foam.
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<b>Unsuitable extinguishing media</b>	No information available.
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**Specific hazards arising from the chemical**

<b>Specific hazards arising from the chemical</b>	Corrosive hazard. Wear protective gloves/clothing and eye/face protection. Contact with metals may evolve flammable hydrogen gas.
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**Special protective actions for fire-fighters**

<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
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**Section 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Avoid contact with skin and eyes. Do not breathe vapor or mist. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Use personal protective equipment as required. Wash thoroughly after handling.
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<b>For emergency responders</b>	Use personal protection recommended in Section 8.
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**Environmental precautions**

<b>Environmental precautions</b>	Local authorities should be advised if significant spillages cannot be contained.
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**Methods and material for containment and cleaning up**

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. After cleaning, flush away traces with water.

**Precautions to prevent secondary hazards**

<b>Prevention of secondary hazards</b>	Clean contaminated objects and areas thoroughly observing environmental regulations.
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**Section 7: Handling and storage****Precautions for safe handling**

<b>Advice on safe handling</b>	Avoid contact with skin, eyes or clothing. Do not breathe vapor or mist. Ensure adequate ventilation. Use personal protection equipment. Wash thoroughly after handling. Keep out of reach of children.
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**Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from foodstuffs. Do not store in aluminium or galvanised containers nor use die-cast zinc or aluminium bungs; plastic bungs should be used. At temperatures greater than 40°C, tanks must be stress relieved. Keep container closed when not in use.
<b>Packaging materials</b>	Do not store in aluminium containers. Do not store in tin containers. Do not store in zinc containers.
<b>Incompatible materials</b>	Acids. Ammonium salts. Aluminum. Tin. Zinc.

**Section 8: Exposure controls/personal protection****Control parameters**

<b>Exposure Limits</b>	No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituents:.
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Chemical name	New Zealand	Australia	ACGIH TLV	United Kingdom
Sodium hydroxide 1310-73-2	Ceiling 2 mg/m <sup>3</sup>	Peak: 2 mg/m <sup>3</sup>	-	-

As published by the New Zealand Workplace Health & Safety Authority.

WES - Ceiling (Workplace Exposure Standard - Ceiling). A concentration that should not be exceeded during any part of the working day.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Appropriate engineering controls**

<b>Engineering controls</b>	Ensure that eyewash stations and safety showers are close to the workstation location. Apply technical measures to comply with the occupational exposure limits.
	If in the handling and application of this material, safe exposure levels could be exceeded,

the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

### **Individual protection measures, such as personal protective equipment**

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



<b>Eye/face protection</b>	Tight sealing safety goggles. If splashes are likely to occur: Face protection shield.
<b>Hand protection</b>	Elbow-length impervious gloves.
<b>Skin and body protection</b>	Overalls. Boots. Apron.
<b>Respiratory protection</b>	If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.
<b>Environmental exposure controls</b>	No information available.

## **Section 9: Physical and chemical properties**

### **Information on basic physical and chemical properties**

<b>Physical state</b>	Liquid
<b>Appearance</b>	Clear
<b>Color</b>	Colourless
<b>Odor</b>	Not specified
<b>Odor threshold</b>	No information available

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	>13	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	ca. 103°C	None known
<b>Flash point</b>	Not applicable	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	Not applicable	
<b>Lower flammability or explosive limits</b>	Not applicable	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	ca. 1.05	None known
<b>Water solubility</b>	Miscible with water	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</b>	No data available	None known
<b>Autoignition temperature</b>	Not applicable	None known

Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

**Other information****Particle characteristics****Section 10: Stability and reactivity****Reactivity**

**Reactivity** May react with ammonium salts resulting in evolution of ammonia gas. Reacts with strong acids.

**Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Possibility of hazardous reactions**

**Possibility of hazardous reactions** Reacts with ammonium salts, evolving ammonia gas. Reacts readily with various reducing sugars (i.e. fructose, galactose, maltose, dry whey solids) to produce carbon monoxide. Take precautions including monitoring the tank atmosphere for carbon monoxide to ensure safety of personnel before vessel entry. Contact with metals (aluminum, zinc, tin) may release hydrogen gas.

**Conditions to avoid**

**Conditions to avoid** Do not contaminate food or feed stuffs. Contact with foodstuffs.

**Incompatible materials**

**Incompatible materials** Acids. Ammonium salts. Aluminum. Tin. Zinc.

**Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

**Section 11: Toxicological information****Acute toxicity****Information on likely routes of exposure**

**Product Information** No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

**Inhalation** May cause irritation.

**Eye contact** Causes serious eye damage.

**Skin contact** Causes severe burns.

**Ingestion**

Can burn mouth, throat, and stomach.

**Symptoms**

Irritation/Corrosion. May cause redness and tearing of the eyes. Can cause corneal burns. Erythema (skin redness). Burning.

**Acute toxicity**

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**Numerical measures of toxicity**

No information available

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium hydroxide	= 325 mg/kg ( Rat )	= 1350 mg/kg ( Rabbit )	-

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation**

Causes severe burns. Classification is based on mixture calculation methods based on component data.

**Serious eye damage/eye irritation**

Causes serious eye damage. Classification is based on mixture calculation methods based on component data.

**Respiratory or skin sensitization**

No information available.

**Germ cell mutagenicity**

No information available.

**Carcinogenicity**

No information available.

**Reproductive toxicity**

No information available.

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

No information available.

**Aspiration hazard**

No information available.

**Data used to identify the health effects**

Refer to Section 16 for Key literature references and sources for data used to compile the SDS.

**Section 12: Ecological information****Ecotoxicity****Aquatic ecotoxicity**

Keep out of waterways.

<b>Terrestrial ecotoxicity</b>	There is no data for this product.
<b>Persistence and degradability</b>	Biodegradation is not an applicable endpoint since the product is an inorganic chemical.

**Bioaccumulative potential**

<b>Bioaccumulation</b>	There is no data for this product.
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**Mobility in soil**

<b>Mobility</b>	No information available.
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**Other adverse effects**

No information available.

**Section 13: Disposal considerations****Waste treatment methods**

<b>Waste from residues/unused products</b>	<p>Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020.</p> <p>Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste.</p> <p>Class 6 and 8 chemicals – may be discharged into the environment if a tolerable exposure limit has been set for the substance (or a component of that chemical); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the tolerable exposure limit. If there is not tolerable exposure limit for the substance, then it may only be discharged into the environment if the substance is very rapidly converted to substances that are not hazardous substances..</p>
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<b>Contaminated packaging</b>	Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical)..
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**Section 14: Transport information**

<b><u>ROAD AND RAIL TRANSPORT</u></b>	Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.
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<b>UN number or ID number</b>	1824
<b>Proper shipping name</b>	SODIUM HYDROXIDE SOLUTION
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	II
<b>Hazchem code</b>	2R

<b><u>IATA</u></b>	Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.
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<b>UN number</b>	1824
<b>UN proper shipping name</b>	SODIUM HYDROXIDE SOLUTION
<b>Transport hazard class(es)</b>	8



<b>Packing group</b>	II
<b>IMDG</b>	Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.
<b>UN number</b>	1824
<b>UN proper shipping name</b>	SODIUM HYDROXIDE SOLUTION
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	II
<b>IMDG EMS Fire</b>	F-A
<b>IMDG EMS Spill</b>	S-B

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No information available

**Special precautions for user**

Please refer to the applicable dangerous goods regulations for additional information

**Section 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EPA New Zealand HSNO approval code or group standard** HSR002596 - Laboratory Chemicals and Reagent Kits

**National regulations** There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

**Certified handlers, tracking and controlled substance license requirements** Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain explosives, vertebrate toxic agents and fumigants. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**International Inventories**

<b>NZIoC</b>	All the constituents of this material are listed on the New Zealand Inventory of Chemicals.
<b>TSCA</b>	Contact supplier for inventory compliance status.
<b>DSL/NDL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECL</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AIIC</b>	Contact supplier for inventory compliance status.
<b>TCSI</b>	Contact supplier for inventory compliance status.

**Legend:****NZIoC - New Zealand Inventory of Chemicals****TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC- Australian Inventory of Industrial Chemicals****TCSI** - Taiwan Chemical Substance Inventory**Section 16: Other information****Prepared By** This Safety Data Sheet has been prepared by IXOM Operations Pty Ltd (Toxicology and SDS Services).**Revision date:** 17-Sep-2024**Reason(s) For Issue:** 5 Yearly Revised Primary SDS  
Change in Hazardous Chemical Classification  
Change to Packing Group**Revision Note:**

\*\*\*Indicates updated data since last publication.

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate

LC50: 50% Lethal Concentration

LD50: 50% Lethal Dose

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
**	Hazard Designation	+	Sensitizers
C	Carcinogen		

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Disclaimer**

**This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since IXOM Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

**If clarification or further information is needed, the user should contact their IXOM representative or IXOM Operations Pty Ltd at the contact details on page 1.**

**IXOM Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.**

**End of Safety Data Sheet**