SAFETY DATA SHEET

Revision date: 16-Aug-2024 **Revision Number** 3

Section 1: Identification

Product identifier

Product Name SUPERSOLVE

Product Code(s) 000000051854

Other means of identification

Recommended use of the chemical and restrictions on use

Recommended use Cleaning in process (CIP) of high temperature milk processing equipment including evaporators, pasteurisers and UHT plant vacreators. CIP of all other processing equipment including milk silos, pipelines and separators.

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
Harmful if swallowed.
Harmful in contact with skin.
Causes severe skin burns and eye damage.
Harmful to aquatic life with long lasting effects.

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash face, hands and any exposed skin thoroughly after handling.
Wash eyes thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/clothing and eye/face protection.
Keep only in original packaging.

Precautionary Statements - Response
Specific treatment (see First aid on this SDS).
Eyes
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.
Skin
Wash contaminated clothing before reuse.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Inhalation
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
Do NOT induce vomiting.
Spill
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-<30%
Potassium hydroxide	1310-58-3	10-<30%
Other 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 and keep at rest in a position comfortable for breathing. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.

Eye contact In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Immediate medical attention is required.

Skin contact Wash off immediately with soap and plenty of water. Take off contaminated clothing and wash before reuse. Immediately call a POISON CENTER or doctor/physician.

Ingestion Clean mouth with water and drink afterwards plenty of water. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed

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

Effects of Exposure No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Can cause corneal burns. Treat symptomatically.

Section 5: Fire-fighting measures

Hazchem code 2R

Suitable Extinguishing Media

Suitable Extinguishing Media Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Corrosive hazard. Wear protective gloves/clothing and eye/face protection. Contact with metals may evolve flammable hydrogen gas. Non-combustible.

Special protective actions for fire-fighters

Special protective equipment and precautions for fire-fighters	Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin and eyes. Do not breathe vapor or mist. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not eat, drink or smoke when using this product. Stop leak if you can do it without risk. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling.
For emergency responders	Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	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

Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling	Avoid contact with skin and eyes. Do not breathe vapor or mist. Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Do not ingest. If swallowed then seek immediate medical assistance. Use personal protection equipment. Wash thoroughly after handling. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. 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. Store away from foodstuffs. Keep container closed when not in use.
Incompatible materials	Acids. Ammonium salts. Tin. Aluminum. Zinc.

Section 8: Exposure controls/personal protection

Control parameters

Exposure Limits No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for constituents:.

Chemical name	New Zealand	Australia	ACGIH TLV	United Kingdom
Sodium hydroxide 1310-73-2	Ceiling 2 mg/m³	Peak: 2 mg/m³	-	-
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m³	Peak: 2 mg/m³	Ceiling: 2 mg/m³	STEL: 2 mg/m³

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

Engineering controls Ensure that eyewash stations and safety showers are close to the workstation location. Ensure ventilation is adequate to maintain air concentrations below Workplace Exposure Standards. 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.

Eye/face protection Tight sealing safety goggles. If splashes are likely to occur:. Face protection shield.

Hand protection Elbow-length impervious gloves.

Skin and body protection Rubber boots. Overalls. If there is a risk of contact:. Chemical resistant apron. Wear suitable protective clothing.

Respiratory protection 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.

Environmental exposure controls No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Color	Amber to Colourless
Odor	Not specified
Odor threshold	No information available

Property	Values	Remarks • Method	
pH	13 (1% w/v)	None known	
None known		**Melting point / freezing point**	<0°C
None known		**Boiling point / boiling range**	No data available
None known		**Flash point**	Not Applicable
None known		**Evaporation rate**	No data available
None known		**Flammability (solid, gas)**	No data available
None known		**Flammability Limit in Air**	
None known		**Upper flammability or explosive limits**	Not Applicable
		Lower flammability or explosive limits	Not Applicable
		Vapor pressure	No data available
None known		**Vapor density**	No data available
None known		**Relative density**	1.42 @20°C
None known		**Water solubility**	No data available
None known		**Solubility(ies)**	Miscible in water
None known		**Partition coefficient**	No data available
None known		**Autoignition temperature**	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 Corrosive to aluminium, tin, and zinc, liberating flammable hydrogen gas. Reacts with acids.

Chemical stability

Stability Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions 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.

Conditions to avoid

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

Incompatible materials

Incompatible materials Acids. Ammonium salts. Tin. Aluminum. 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. Harmful if swallowed.

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

Acute toxicity .

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)	-
Potassium hydroxide	= 284 mg/kg (Rat)	-	-

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 Avoid contaminating waterways.

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
Potassium hydroxide	0.83

Mobility in soil

Mobility No information available.

Other adverse effects

No information available.

Section 13: Disposal considerations

Waste treatment methods

Waste from residues/unused products	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. 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. 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..
Contaminated packaging	For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if: - the substance has a physical hazard other than corrosive to metal, and has been treated to remove any residual contents of the hazardous substance; - or for substances that have a health or environmental hazard, or corrosive to metal, the contents of the residue in the package are below the threshold for the substance to be classified as hazardous in the Hazardous Substances (Hazard Classification) Notice 2020.

Section 14: Transport information

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

UN number or ID number	1719
Proper shipping name	CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE AND POTASSIUM HYDROXIDE)
Transport hazard class(es)	8
Packing group	II
Hazchem code	2R

IATA Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN number	1719
UN proper shipping name	CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE AND POTASSIUM HYDROXIDE)
Transport hazard class(es)	8
Packing group	II

IMDG Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number	1719
UN proper shipping name	CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE AND POTASSIUM HYDROXIDE)
Transport hazard class(es)	8
Packing group	II
IMDG EMS Fire	F-A
IMDG EMS Spill	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

National regulations

EPA New Zealand HSNO approval code or group standard	HSR002526 - Cleaning Products (Corrosive)
National regulations	See section 8 for national exposure control parameters
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

NZIoC	Contact supplier for inventory compliance status.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
TCSI	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:	16-Aug-2024
Reason(s) For Issue:	5 Yearly Revised Primary SDS

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