

SAFETY DATA SHEET



Revision date: 15-Nov-2022

Revision Number 1

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name SuperFlux Amplify

Product Code(s) 000000054417

Other means of identification

Proper shipping name CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE AND POTASSIUM HYDROXIDE)

UN number 1719

Recommended use of the chemical and restrictions on use

Recommended use Alkaline membrane detergent.

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 Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700

Facimile: +64 9 368 2710

For further information, please contact

Contact Point Product Safety Department

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.

2. HAZARDS 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

SIGNAL WORD

Danger

Cleaning Products (Corrosive) Group Standard 2020

Approval Number: HSR002526

| | |
|-----------------------------------|---------------------------|
| 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**Hazard statements**

H290 - May be corrosive to metals

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear protective gloves / protective clothing / eye protection / face protection

Do not breathe fume, gas, mist, vapours, spray

Keep only in original packaging

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

Wash contaminated clothing before reuse

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up

Store in corrosive 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**3. COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

| Chemical name | CAS No. | Weight-% |
|--------------------------------|-----------|----------|
| Carbonate(s) | - | 10-<30 |
| Sodium hydroxide | 1310-73-2 | 5-<30 |
| Potassium hydroxide | 1310-58-3 | 5-<30 |
| Other non-hazardous components | - | to 100 |

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 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 | Rinse mouth immediately and drink plenty of water. Do not induce vomiting without medical advice. Get immediate medical advice/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. |
|-----------------|--|

Indication of any immediate medical attention and special treatment needed

| | |
|---------------------------|---|
| Note to physicians | Treat symptomatically. Can cause corneal burns. |
|---------------------------|---|

5. FIRE FIGHTING MEASURES**Suitable Extinguishing Media**

| | |
|-------------------------------------|---|
| Suitable Extinguishing Media | Dry chemical, CO2, alcohol-resistant foam or water spray. |
|-------------------------------------|---|

| | |
|---------------------------------------|---------------------------|
| 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 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. |
|---|--|

| | |
|---------------------|----|
| Hazchem code | 2R |
|---------------------|----|

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

| | |
|-----------------------------|---|
| Personal precautions | Avoid contact with skin, eyes and inhalation of vapors. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Stop leak if you can do it without risk. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Do not use |
|-----------------------------|---|

steel or aluminum tools or equipment.

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 Take up with sand, earth or other non-combustible absorbent material. Avoid breathing dust or spray mist. 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.

7. HANDLING AND STORAGE

Precautions for safe handling

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

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Store away from foodstuffs. Keep container closed when not in use.

Incompatible materials Ammonium salts. Acids. Aluminium. Tin. Zinc.

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 constituent(s):

Sodium hydroxide: Ceiling 2 mg/m³
Potassium hydroxide: Ceiling 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. 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

Boots. Overalls. If there is a risk of contact: Chemical resistant apron.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|----------------|---------------------------|
| Physical state | Liquid |
| Appearance | No information available. |
| Color | No information available. |
| Odor | No information available. |
| Odor threshold | No information available. |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------|-------------------|-------------------------|
| pH | No data available | None known |
| pH (as aqueous solution) | No data available | None known |
| Melting point / freezing point | No data available | 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 | 1.24 | None known |
| Water solubility | Miscible in water | None known |
| Solubility(ies) | No data available | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | Not Applicable | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |

Other information**10. STABILITY AND REACTIVITY**Reactivity

Reactivity Corrosive to aluminium, tin, and zinc, liberating flammable hydrogen gas.

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 Contact with foodstuffs.

Incompatible materials

Incompatible materials Ammonium salts. Acids. Aluminium. Tin. Zinc.

Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATIONAcute toxicityInformation 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 | Contact causes severe skin irritation and possible 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**

Refer to component information below.

Component Information

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------------|---------------------|-------------------------|-----------------|
| Sodium hydroxide | - | = 1350 mg/kg (Rabbit) | - |
| Potassium hydroxide | = 284 mg/kg (Rat) | - | - |

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|--|--|
| Skin corrosion/irritation | Causes 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. |

12. ECOLOGICAL INFORMATION**Ecotoxicity**

| | |
|--------------------------------|------------------------------------|
| Ecotoxicity | Avoid contaminating waterways. |
| Terrestrial ecotoxicity | There is no data for this product. |

| Chemical name | Algae/aquatic plants | Fish | Crustacea |
|---------------------|----------------------|--|-----------|
| Sodium hydroxide | - | LC50: =45.4mg/L (96h, Oncorhynchus mykiss) | - |
| Potassium hydroxide | - | LC50: =80mg/L (96h, Gambusia affinis) | - |

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation No information available.

Mobility

Mobility in soil No information available.

Component Information

| Chemical name | Partition coefficient |
|---------------------|-----------------------|
| Potassium hydroxide | 0.65 |
| | 0.83 |

Other adverse effects

Other adverse effects No information available.

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 chemicals, the person must ensure that the package is rendered incapable of containing any chemical. It must be disposed of in a manner that is consistent with the requirements for disposal of the chemical that it contained, taking into account the material the package is manufactured from. 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).

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 | 1719 |
| Proper shipping name | CAUSTIC ALKALI LIQUID, N.O.S. (CONTAINS SODIUM HYDROXIDE AND POTASSIUM HYDROXIDE) |
| Hazard class | 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 |
| Marine pollutant | No |

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations

New Zealand

National regulations See section 8 for national exposure control parameters

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. |

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
AIC - Australian Inventory of Industrial Chemicals

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

16. OTHER INFORMATION

Prepared By This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

Issuing Date: 15-Nov-2022

Reason(s) For Issue: First Issue Primary SDS

Revision Note:

The symbol (*) in the margin of this SDS indicates that this line has been revised.

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

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

| | | | |
|---------|-----------------------------|------|----------------------------------|
| TWA | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value | * | Skin designation |
| 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)
 EPA (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)
 Japan GHS Classification
 Australian Industrial Chemicals Introduction Scheme (AICIS)
 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)
 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
 RTECS (Registry of Toxic Effects of Chemical Substances)
 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