

MATERIAL SAFETY DATA SHEET

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name: CALCIUM HYPOCHLORITE 70% - Japanese Origin
Trade Name: NICLON 70G
Synonym(s):
Product Use: Swimming pool chemical, algicide, biocide, oxidant.
Supplier Name: Argo International Ltd
Address: Level 9. 9 Victoria Street East, Auckland
Telephone: +64 9 377 5061
Fax: +64 9 309 1992
Email: argo@argoint.co.nz
Website: Argoint.co.nz
Emergency Number(s): For advice, contact the National Poisons Centre
 (New Zealand: Phone 0800 764766) or a doctor

SECTION 2: HAZARDS IDENTIFICATION

| GHS Classification | HSNO Classification |
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| Oxidising Solids: Category 2 | 5.1.1B |
| Acute Toxicity: Oral, Category 4 | 6.1D |
| Organ Target: Category 2 | 6.9B |
| Skin Irritation: Category 1A | 8.2A |
| Eye Irritation: Category 1 | 8.3A |
| Aquatic: Category 1 | 9.1A |

UN label elements:



Hazard Statement: Intensifies fires.
 Oxidiser.
 Harmful if swallowed.
 Causes serious skin burn/eye damage.
 May cause serious damage to organs.
 Very toxic to aquatic life.

Precautionary Measures: Keep away from heat.
Do NOT eat, drink or smoke when using this product.
 Wash thoroughly after handling.
 Wear protective gloves, eye protection and face shield.
 Store away from flammable substances and other incompatible substances.
 Use dust/mist filtering respirator.
 Do not inhale dust or fumes.

Measures

Inhalation: Remove victim to fresh air.
 Keep at rest in a comfortable position for breathing.
 Immediately call Poisons Centre
 (New Zealand: Phone 0800 764 766) or a doctor.

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Skin/Hair: Remove contaminated clothing.
Rinse skin with water/shower, seek medical attention..
Wash contaminated clothing before re-use.

Ingestion: Wash mouth. **Do NOT** induce vomiting.
Seek medical attention immediately.

Eyes: Wash in water for 15 minutes, holding eyelids open.
Remove contact lenses if present and easy to do.
Continue rinsing.
Seek medical attention immediately.

Decomposition: This product is decomposed by contact with heat, grease, oils, reducing substances and other flammable substances.
Causes fire and/or explosion.
Harmful and explosive gas is generated by mixing with Chlorinated Isocyanuric acid (organic Chlorinated lime).

Summary of assumed Emergency: Reacts with contact with organic substances, reducing substances and flammable substances. May cause fire/explosion.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**Classification of the chemical substance**

Chemical name: Calcium Hypochlorite.

Chemical Formula: $\text{Ca}(\text{ClO})_2$.

Chemical Name: Calcium Hydroxide.

Chemical Formula: $\text{Ca}(\text{OH})_2$.

Name: Water.

Formula: H_2O .

Concentration or Concentration Range:

| Chemical/Common Name | Abbreviation | Concentration or Concentration Range. | Reference No in Gazetted List in Japan Japanese Chemical Substance Control Law (JCSCL) | Reference No in Gazetted List in Japan. Japanese Industrial Safety and Health Law | CAS No |
|----------------------|--------------|--|---|--|-----------|
| Calcium Hypochlorite | - | Not less than 70%(in available chlorine) | (1)-177 | Existing Chemical Substances. | 7778-54-3 |
| Calcium Hydroxide | - | 1-5% | (1)-181 | Existing Chemical Substances. | 1305-62-0 |
| Water | - | 7-16% | N/A | N/A | 7732-18-5 |

Impurities and stabilizing additives which contribute to the classification of GHS. No information available.

SECTION 4: FIRST AID MEASURES

NOTE: First aiders should wear gloves to avoid contacting hazards.

Inhalation: Remove victim to fresh air.
Keep at rest in a comfortable position for breathing.
Immediately call Poisons Centre
(New Zealand: Phone 0800 764 766) or a doctor.



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| Skin/Hair: | Remove contaminated clothing. Rinse skin with water/shower, seek medical attention. Wash contaminated clothing before re-use. |
| Ingestion: | Wash mouth. Do NOT induce vomiting. Seek medical attention immediately. |
| Eyes: | Wash in water for 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Continue rinsing. |
| Important: | Causes severe eye damage attributed to alkaline. |
| <u>Protection for First Aiders:</u> | Remove contaminated clothing and protective equipment. First aiders should wear gloves to avoid contacting hazards. |

SECTION 5: FIRE FIGHTING MEASURES

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| Decomposition: | This product is decomposed by contact with heat, grease, oils, reducing substances and other flammable substances. Causes fire and/or explosion. Harmful and explosive gas is generated by mixing with Chlorinated Isocyanuric acid (organic Chlorinated lime). |
| Extinguishing media: | Plenty of water. |
| Unsuitable extinguishing media: | Dry chemical powder, foam. |
| Specific hazards: | Product decomposes rapidly by heating. Irritating, toxic or corrosive gasses may be generated. Product has fire assist property and might intensify fire. |
| Specific fire fighting measures: | Without any risks such as exposure to heat, evacuate containers to a safe place. For irremovable containers, cool containers with water sprat to prevent increase of container temperature. Cool with enough water after fire-fighting. |
| Special protective equipment for the fire fighter: | During fire-fighting, wear heat resistance gloves, safety goggles and breathing apparatus. |

SECTION 6: ACCIDENTAL RELEASE MEASURES

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| Personal Precautions, Protective & Emergency Procedures: | If indoors, conduct ventilation sufficiently until the disposal is complete. Keep people away from around the leakage site by encircling it with a cordon tape. During working wear protection as stated in Section 8 in order to prevent adhering powder to the skin and inhalation of gas. |
| Environmental precautions: | Do not drain the leaked product directly into the rivers and the sewerage. |
| Clean Up: | Collect the leaked product as much as possible. Flush with plenty of water. Dispose of the leaked product in accordance with Section 13). |
| Prevention measures of a secondary disaster: | Keep flammable substances (paper, wood, oil, etc) away from leaked product. |

SECTION 7: HANDLING AND STORAGE

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| Safe Handling Advice: | Keep away from flammable substances and oxidising substances such as grease/oils/reducing substances. Avoid contact with nitrogen compounds such as Ammonia and its salts. Avoid contact with Chlorinated Isocyanuric acid. Use away from fire and hot surfaces. |
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| Storage: | Do not leave wet. |
| | Do not drink, eat or smoke during handling. |
| | Wash hands thoroughly after handling. |
| | Store away from flammables/incompatible substances. |
| | Keep under lock and key. |
| Engineering Controls: | Store in a well ventilated cool place. |
| | Protect from fire, heat and direct sunlight. |
| | Do not damage or give strong shock to the packaging containers during storage. |
| | Take facility measures stated in Section 8. |
| | Never handle the container roughly such as tumbling, dropping, impacting or dragging. |
| Local and Ventilation: | Use clean, dry containers/equipment made of stainless steel, china, resin or glass during handling. |
| | Conduct local or entire exhaust ventilation stated in Section 8. |
| General Precautions: | Exercise caution especially during handling high concentration of aqueous solutions since the severity of skin/eye irritation of the aqueous solutions increases with the concentration. |
| | Do not contact with skin/eyes, swallow or inhale. |

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

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| Facility Measures: | Install a ventilation system at handling place. Install eye washing facility and shower. |
| Administrative Levels: | Not established. |
| Occupational Exposure Limit: | Not established. |
| <u>Personal protective Equipment:</u> | |
| Inhalation: | Dust/mist filtering respirator, air supplied mask, respirator, etc |
| Hand protection: | Rubber protective gloves. |
| Eye protection: | Safety goggles |
| Skin and body protection: | Working clothing with long sleeves and long pants. |
| Appropriate hygiene measures: | Wash hands thoroughly. |
| | Gargle after working, before eating and drinking. |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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| Physical State: | Solid (Granular). |
| Colour: | White – whitish. |
| Odour: | Odour of Chlorine. |
| pH: | Alkaline when dissolved in water. |
| Melting Point: | Not applicable. |
| Freezing Point: | Not applicable. |
| Boiling Point: | Not applicable. |
| Flash Point: | Not applicable. |
| Auto Ignition Temperature: | No data. |
| Flammability (solid, gas): | Non-combustible. |
| Lower Flammability or Explosive Limits: None. | |
| Upper Flammability or Explosive Limits: None. | |
| Vapour Pressure: | No data. |
| Vapour Density: | No data. |
| Evaporation Rate: | Not applicable. |
| Specific Gravity (Relative Density): 2.35 at 20°C | |
| Solubility: | 21.4% (in water at 25°C) |

**MATERIAL SAFETY DATA SHEET****Partition, Coefficient n-octanol/water:** No data.**Decomposition Temperature:** 177°C.**Other Information:** Not available.**SECTION 10: STABILITY AND REACTIVITY****Chemical Stability:** Stable under ordinary storage and handling conditions.

This product is decomposed by contact with heat and acids.

Light and Chlorine gas is generated.

Possibility of Hazardous Reactions: This product violently reacts with flammable substances and reducing substances and may cause ignition and explosion.**Conditions to avoid:** Avoid contact with direct sunlight and high temperature body.**Incompatible materials:** Oils, Grease, reducing substances, Oxidising substances, Ammonia and its salts, Nitrogen compounds, Chlorinated Isocyanuric acid, etc.**Hazardous decomposition Products:** Chlorine and Nitrogen compounds are formed by contact with acids.

Explosive and toxic Nitrogen Trichloride is formed by contact with Chlorinated Isocyanuric acid.

Storage: Store locked up.

A storage place should be a fire-proof structure.

Store in a dry indoor place.

Protect from direct sunlight.

Install ventilation facility.

Store away from flammable substances and incompatible substances.

Appropriate Storage Conditions: Avoid contact with grease, oils, reducing substances, flammable substances, oxidising substances, Ammonia and its salts, Nitrogen compounds, and Chlorinated Isocyanuric acid.**Safe Containers and Packaging materials:** Dry containers made of stainless, china, resin or glass.**SECTION 11: TOXICOLOGICAL INFORMATION****Acute Toxicity:**

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| Calcium Hypochlorite | 790 mg/kg | Oral rat (LD50) | SIDS |
| Calcium Hypochlorite | >2000 mg/kg | Hypodermic rabbit (LD50) | HSDB |

Product: Harmful if swallowed.

Skin Corrosion/Irritation**Product:** Causes serious skin burn/eye damage.**Calcium Hypochlorite:** It is indicated that this product may cause moderate to severe skin damage.**Calcium Hypochlorite:** Severe skin irritation is indicated.**Calcium Hypochlorite:** In the description, skin corrosion was observed in the test in rabbits.**Serious Eye damage/irritation****Product:** Causes serious eye damage.**Calcium Hypochlorite:** This product is indicated to cause severe eye irritation by contact.**Calcium Hypochlorite:** It is indicated that eye corrosion was observed in eye irritation test in animals.**Respiratory sensitisation/Skin sensitisation:** Unknown.**Mutagenicity (Germ cell mutagenicity):** Unknown.**Carcinogenicity:****Calcium Hypochlorite:** IAC: Group 3 (Cannot be classified as to its carcinogenicity to humans.)**Reproductive Toxicity:** Unknown.**Specific Target Organ Toxicity: Single Exposure:**

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Product: May cause damage to organs (respiratory system).
Calcium Hypochlorite: It is indicated that if inhaled, this product causes irritation to the lungs and may cause pulmonary edema.

Specific Target Organ Toxicity: Repeated Exposure: Unknown.
Aspiration Hazard: Unknown.

SECTION 12: ECOLOGICAL INFORMATION**Eco-toxicity****Fish:**

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| Calcium Hypochlorite | 0.049-0.16 mg/L (95h) | Bluegill (LC50) | IUCLID |
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Crustacea: No information available.
Algae: No information available.
Mobility in soil: No information available.
Persistence/ Degradability: Decomposed under the presence of light.
Bio-accumulative Potential: Although acute toxicity is strong, bioaccumulation is estimated low.
Other adverse effects: In order to prevent marine organisms and birds from taking it, the product must not be disposed of or released into any ocean or water areas.

SECTION 13: DISPOSAL CONSIDERATIONS

Residual Wastes: Do not throw away in general garbage.
For disposal, dissolve the product in water, dilute, process with reductants such as Sodium Thiosulfate and Sodium Sulphite.
Dilute with plenty of water and dispose of the solution in accordance with the regulated laws and regulations.

Contaminated containers and packaging: For used containers, remove the contents completely.
Commit disposal to industrial waste disposal contractor that have received approval from the municipalities.

SECTION 14: TRANSPORT INFORMATION**International Regulations:**

UN Classification: Class 5.1 (Oxidising Substances).
Secondary Risk Class 8 (Corrosive substances).

UN Number: 3487 Calcium Hypochlorite, Hydrated, Corrosive or Calcium Hypochlorite, Hydrated Mixture, Corrosive with not less than 5.5% but not more than 16% water.

Packing group: II.

First Aid Guide Number: 140 (Oxidizing solid N.O.S.).

Domestic Regulations: Refer to laws and regulations that are applied.

Special Precautions: No information available.

Special precautions and conditions in transport:
At the time of transportation by vehicles, always have the driver carry yellow cards.
Protect from direct sunlight.
No exposure to water.
Do NOT lay down.
During cargo handling, handle cautiously and carefully.
Avoid damages to container and scattering by falling or impact.
Avoid scattering contents.
Exercise caution. **Do NOT** roll containers.



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Do not plunge container with hand claws and claws of forklift.
Prevent contact with water leakage or contact with vehicle exhaust gas.
Avoid contact with Trichloroisocyanuric acid (organic Chlorinated lime) reducing substances, flammable substances and acids.

SECTION 15: REGULATORY INFORMATION

New Zealand: This substance is classified as a hazardous substance in accordance with the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Approval Number: HSR 001452.

SECTION 16: OTHER INFORMATION

Disclaimer

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