



## MATERIAL SAFETY DATA SHEET

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

**Product Name:** SODIUM DICHLOROISOCYANURATE ANHYDROUS  
**Trade Name:**  
**Other name(s):**  
**Synonym(s):** Iso chlor; SDIC; Sodium dichloro-s-triazine trione; Dichloroisocyanuric acid, Sodium salt, Neochlor 60; Basolan DC; Bluewater EconoChlor.  
**Product Use:** Bleach or sanitising chemical  
**Supplier Name:** Argo International Ltd  
**Address:** 9 St Benedict's St, Eden Terrace, 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 764 766) or a doctor

### SECTION 2: HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:1999 Transport of Dangerous Goods on Land.  
Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001.

#### HSNO Classifications:

5.1.1B (Oxidising Substances that are solids or liquids: medium hazard).  
6.1D Substances which are acutely toxic.  
6.3A Substances that are irritating to the skin.  
6.4A Substances that are irritating to the eye.  
9.1A Substances that are very ecotoxic in the aquatic environment.  
9.2A Substances that are very ecotoxic in the soil environment.  
9.3C Substances that are harmful to terrestrial vertebrates.

#### Risk Phrases:

R8 Contact with combustible material may cause fire.  
R22 Harmful if swallowed.  
R31 Contact with acids liberates toxic gas.  
R36 Irritating to eyes.  
R37 Irritating to respiratory system.  
R50 Very toxic to aquatic organisms.  
R53 May cause long-term adverse effects on the aquatic environment.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Concentration
Sodium Dichloroisocyanurate (630 g/kg available Chlorine)	2893-78-9	100%

### SECTION 4: FIRST AID MEASURES

**Inhalation:** **AVOID BECOMING A CASUALTY.**  
Remove victim from area of exposure.  
Remove contaminated clothing and loosen remaining clothing.  
Allow patient to assume most comfortable position and keep warm.  
Keep at rest until fully recovered.



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If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

**Skin Contact:** If skin contact occurs, remove contaminated clothing and wash skin with running water.

**Eye Contact:** If irritation occurs seek medical advice. If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

**Ingestion:** Immediately rinse mouth with water. If swallowed, **DO NOT** induce vomiting. Give a glass of water. Seek immediate medical assistance.

**Medical attention and special treatment:** Treat symptomatically. Delayed effects from exposure to chlorine (decomposition product) can include shortness of breath, severe headache, pulmonary oedema and pneumonia.

### SECTION 5: FIRE FIGHTING MEASURES

**Hazards from combustion products:** Non combustible, but will support combustion of other materials.

**Precautions for fire fighters and special protective equipment:** Sodium Dichloroisocyanurate is a powerful oxidising agent and decomposes violently upon heating releasing oxygen. In case of fire, area must be evacuated and specialist fire fighters called. Only large quantities of water should be used as an extinguishing agent. If excess water is not available DO NOT attempt to extinguish the fire; use available water to prevent the spread of fire to adjacent property. Attending firefighters should keep upwind if possible and wear full protective equipment including rubber boots and self-contained breathing apparatus. A fire in the vicinity of Sodium Dichloroisocyanurate should be extinguished in the most practical manner but avoid contaminating this material with the firefighting agent, including water. Sodium Dichloroisocyanurate decomposes on contact with water evolving toxic Chlorine gas and in the presence of small amounts of water, the explosive gas Nitrogen Trichloride. Once fire is extinguished, wash area thoroughly with excess water. Ensure that drains are not blocked with solid material. Maintenance of excess water during cleaning up operation is essential. Combustible material involved in the incident should be removed to a safe open area for controlled burning or for further drenching with water prior to collection for disposal.

**Suitable Extinguishing Media:** Spray large quantities of water.  
**Hazchem Code:** 2WE.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Emergency procedures:** Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.



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**Methods and materials for containment and clean up:** Wear protective equipment to prevent skin and eye contact and breathing in vapours.

Air supplied masks are recommended to avoid inhalation of toxic material.

**DO NOT** return spilled material to original container.

**DO NOT** add small amounts of water to Sodium Dichloroisocyanurate.

Collect and transfer to large volume of water - **DO NOT** use a metal container.

To neutralise add Sodium Sulphite (2.4 kg/kg product).

If no active Chlorine remains, add soda ash (1.1 kg/kg product) to effect complete neutralisation.

Where a spill has occurred in a confined space or an inadequately ventilated enclosure and the material is damp and evolving Chlorine, the rate of Chlorine evolution can be reduced by covering the thinly spread solid with soda ash.

### SECTION 7: HANDLING AND STORAGE

**Precautions for safe handling:** Avoid skin and eye contact and breathing in dust. Keep out of reach of children.

**Conditions for safe storage:** Store in a cool, dry, well ventilated place and out of direct sunlight.

Store away from foodstuffs.

Store away from incompatible materials described in Section 10.

Keep dry -reacts with water, may lead to drum rupture.

Keep containers closed when not in use -check regularly for spills.

### SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Occupational Exposure Limits:** No value assigned for this specific material by the New Zealand Occupational Safety and Health Service (OSH). However, Exposure Standard(s) for decomposition product(s):

Chlorine: WES-TWA 0.5 ppm, 1.5 mg/m<sup>3</sup>; WES-STEL 1 ppm, 2.9 mg/m<sup>3</sup>

As published by the New Zealand Occupational Safety and Health Service (OSH).

**WES - TWA** (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

**WES - STEL** (Workplace Exposure Standard - Short Term Exposure Limits) - The 15 minute average exposure standard. Applies to any 15 minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and eight-hour, time-weighted average exposures should be determined.

These 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 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.

#### Engineering Controls:

Ensure ventilation is adequate and that air concentrations of decomposition product(s) is/are controlled below quoted exposure standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

#### 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.



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**PPE:** Wear overalls, chemical goggles and impervious gloves.  
Avoid generating and inhaling dusts.  
If dust exists, wear dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.  
Always wash hands before smoking, eating, drinking or using the toilet.  
Wash contaminated clothing and other protective equipment before storage or re-use.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Crystalline Powder, granules or tablets.  
**Colour:** White.  
**Odour:** Slight Chlorine.  
**Molecular Formula:**  $C_3HCl_2N_3O_3.Na$ .  
**Solubility:** Soluble in water.  
**Specific Gravity:** 2.03 (water = 1).  
**Relative Vapour Density (air=1)** Not available.  
**Vapour Pressure (20 °C):** Not available.  
**Flash Point (°C):** Not applicable.  
**Flammability Limits (%):** Not applicable.  
**Autoignition Temperature (°C):** Not applicable.  
**Solubility in water (g/L):** 250 @ 25°C  
**Melting Point/Range (°C):** 240.  
**Decomposition Point (°C):** 240.  
**pH:** 6.5 (1% solution).

### SECTION 10: STABILITY AND REACTIVITY

**Chemical stability:** Powerful oxidising agent. Sodium Dichloroisocyanurate reacts with water and acids evolving toxic Chlorine gas and in the presence of small amounts of water, the explosive gas Nitrogen Trichloride.  
Decomposes in alkaline conditions evolving Carbon Dioxide, Nitrogen and Chloramine gases.

**Conditions to avoid:** Avoid exposure to moisture.  
Avoid exposure to heat.  
Avoid exposure to direct sunlight.

**Incompatible materials:** Incompatible with combustible materials, Ammonium salt, Nitrogenous materials, acids, and water.

**Hazardous decomposition products:** Chlorine.

**Hazardous reactions:** Sodium Dichloroisocyanurate reacts with water and acids evolving toxic Chlorine gas and in the presence of small amounts of water, the explosive gas Nitrogen Trichloride.  
Decomposes in alkaline conditions evolving Carbon Dioxide, Nitrogen and Chloramine gases.

### SECTION 11: TOXICOLOGICAL INFORMATION

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

**Ingestion:** Swallowing can result in nausea, vomiting, diarrhoea, and gastrointestinal irritation.  
**Eye contact:** An eye irritant.  
**Skin contact:** Contact with skin may result in irritation.



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<b>Inhalation:</b>	Material is an irritant to the mucous membranes of the respiratory tract (airways). Inhalation of high concentrations may result in shortness of breath, chest pain, severe headache and lung damage including pulmonary oedema. Effects may be delayed.
<b>Long Term Effects:</b>	No information available for the product.
<b>Toxicological Data:</b>	Oral LD50 (rat): 1355-1400 mg/kg. (1).

### SECTION 12: ECOLOGICAL INFORMATION

<b>Eco-toxicity:</b>	Avoid contaminating waterways.
<b>Aquatic toxicity:</b>	Very toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

### SECTION 13: DISPOSAL CONSIDERATIONS

<b>Disposal methods:</b>	Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Add Sodium Dichloroisocyanurate into dilute solution of Sodium Hydroxide or soda ash with stirring gradually and neutralize that solution with reduction agents such as Sodium Sulphite and Sodium Thiosulphate. Adjust pH with Sulphuric acid or Hydrochloric acid to make neutral solution and dispose.
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### SECTION 14: TRANSPORT INFORMATION

#### Road and Rail Transport:

Classified as a Dangerous Good according to NZS 5433:1999 Transport of Dangerous Goods on Land.

<b>UN No:</b>	2465.
<b>Class-primary:</b>	5.1 Oxidizing Agent.
<b>Packing Group:</b>	II.
<b>Proper Shipping Name:</b>	DICHLOROISOCYANURIC ACID SALTS.
<b>Hazchem Code:</b>	2WE.

#### Marine Transport:

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

<b>UN No:</b>	2465.
<b>Class-primary:</b>	5.1 Oxidizing Agent.
<b>Packing Group:</b>	II.
<b>Proper Shipping Name:</b>	DICHLOROISOCYANURIC ACID SALTS.

#### Air Transport:

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

<b>UN No:</b>	2465.
<b>Class-primary:</b>	5.1 Oxidizing Agent.
<b>Packing Group:</b>	II.
<b>Proper Shipping Name:</b>	DICHLOROISOCYANURIC ACID SALTS.

### SECTION 15: REGULATORY INFORMATION

<b>Classification:</b>	Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001.
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**Approval Number:** Cleaning Products (Oxidising [5.1.1] Group Standard 2006 HSR 006419

### SECTION 16: OTHER INFORMATION

(1) Supplier Material Safety Data Sheet.

This material safety data sheet has been prepared by **ARGO INTERNATIONAL LTD.**

#### **Safety Data Sheet**

##### **Reason(s) for Issue:**

Revised Primary MSDS.

Addition/Change of synonymous name(s).

This MSDS 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 Argo International 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 Argo International Ltd representative or Argo International Ltd at the contact details on page 1.

#### **Disclaimer**

The modifications to this Safety Data Sheet made by M J Nankivell HazTec Ltd have been restricted to adding New Zealand specific information only as required under the HSNO Act 1996 and associated regulations and no changes have been made to the technical content.

No liability or responsibility shall be taken by M J Nankivell HazTec Ltd for the technical content, or accidents or incidents arising from the use thereof.