Safety Data Sheet

Hazardous, Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: POOLSTAR HANDICHLOR (Dihydrate Form)

Synonyms
Poolstar Handichlor
1,3-Sodium Dichloro Isocyanurate Dihydrate
Troclosene Sodium Dihydrate

Product Code

Recommended use: Swimming pool sanitizer, bleaching agent.

Supplier: Clark Products
Company No.:
Street Address: 75 Niven Street Onekawa
Napier 4110 New Zealand
Telephone: 06 8433163
Facsimile: 06 8432958
Email: orders@clarkproducts.co.nz

Emergency Telephone number: 0800 CHEMCALL (0800 243 622)

2. HAZARDS IDENTIFICATION

This material is hazardous according to the criteria of EPA New Zealand GHS 7.

EPA Group Standard: HSR002684 - Water Treatment Chemicals (Subsidiary Hazard) Group Standard 2020

Signal Word
Warning

Hazard Classifications
Acute Toxicity - Oral - Category 4
Acute Toxicity - Inhalation - Category 4
Skin Corrosion/Irritation - Category 2
Serious Eye Damage/Irritation - Category 2
Specific Target Organ Toxicity following Single Exposure - Category 3 - Respiratory Tract Irritation
Acute Hazard to the Aquatic Environment - Category 1
Long Term Hazards to the Aquatic Environment - Category 1

Hazard Statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.

Prevention Precautionary Statements

P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.

P261	Avoid breathing dust, fume, gas, mist, vapours or spray.
P264	Wash hands, face and all exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing including eye/face protection.

Response Precautionary Statements

P101	If medical advice is needed, have product container or label at hand.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing.
P391	Collect spillage.

Storage Precautionary Statements

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal Precautionary Statement

P501	Dispose of contents/container in accordance with local, regional, national and international regulations.

DANGEROUS GOOD CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Dangerous Goods Class: 5.1

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3-dichloro-, sodium salt, dihydrate	51580-86-0	>95 % (w/w)
Moisture	7732-18-5	<5 % (w/w)
		100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.

Skin Contact: If skin or hair contact occurs, immediately remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre or a Doctor; or for 15 minutes and transport to Doctor or Hospital.

Eye contact: If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a Doctor; or for at least 15 minutes and transport to Doctor or Hospital.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Immediately call Poisons Centre or Doctor.

PPE for First Aiders: Wear rubber boots, overalls, gloves, apron, chemical goggles, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from butyl rubber, nitrile rubber, neoprene should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes to physician: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Hazchem Code: 2Z

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: Combustible material.

Fire fighting further advice: On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS
Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

LARGE SPILLS
Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

Dangerous Goods - Initial Emergency Response Guide No: 47

7. HANDLING AND STORAGE

Handling: Avoid eye contact and skin contact. Avoid inhalation of dust.

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. Store away from sources of heat and/or ignition.

Store locked up. Keep container standing upright. Keep containers closed when not in use - check regularly for spills.

This material is classified as a Class 9 Miscellaneous Dangerous Good as per the criteria of the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and/or the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and must be stored in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:

	TWA		STEL		NOTICES
	ppm	mg/m3	ppm	mg/m3	
Chlorine	0.5	1.5	1	2.9	

As published by WorkSafe New Zealand.

WES-TWA (Workplace Exposure Standard - Time-weighted average). The average airborne concentration of a substance calculated over an eight-hour working day.

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

WES-STEL (Workplace Exposure Standard - Short-term exposure limit). The 15-minute time weighted 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 the short-term and time-weighted average exposures apply. Exposures at concentrations between the WES-TWA and the WES-STEL should be less than 15 minutes, should occur no more than four times per day, and there should be at least 60 minutes between successive exposures in this range.

ppm Parts of vapour or gas per million of air by volume.

mg/m3 Milligrams of substance per cubic metre of air.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too 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.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

Biological Limit Values: As per the WorkSafe New Zealand the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Avoid generating and inhaling dusts. Use with local exhaust ventilation or while wearing dust mask.

Personal Protection Equipment: RUBBER BOOTS, OVERALLS, GLOVES, APRON, CHEMICAL GOGGLES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear rubber boots, overalls, gloves, apron, chemical goggles, respirator. Use with adequate ventilation. If

inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from butyl rubber, nitrile rubber, neoprene should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Material Family:	Chlorine Compounds
Base Units:	Kilogram
Form:	Granules
Colour:	White
Odour:	A strong Chlorine odour

Solubility:	Reacts with Organic Chemicals
Solubility in water:	285g/L in water at 25°C
Specific Gravity:	0.90-1.00
Density:	900-1000 kg/m3 at 20°C
Relative Vapour Density (air=1):	N Av
Vapour Pressure:	N Av (releases Chlorine gas and Moisture)
Flash Point (°C):	N App
Explosion/Flammability Limits:	N App
Autoignition Temperature (°C):	N App (Aqueous Sol'n)
Melting Point/Range (°C):	N Av
Boiling Point/Range (°C):	N App (decomposes)
Decomposition Point (°C):	>200°C (estimated). Note: slow decomposition at room temp. (from an open container) releases Chlorine Gas
pH:	5.5-7.0 at 25°C (1% Solution)
Viscosity:	N Av
Evaporation Rate (n-Butyl acetate=1):	N Av
Total VOC (g/Litre):	Nil
Explosive properties:	N App
% Volatile by Volume:	<5% (moisture loss on Initial drying). A further 14% IF the Dihydrate is removed.
Molecular Formula:	C3-H-Cl2-N3-O3.Na.2H20
Molecular Weight:	256.0
Particle Size	N Av

(Typical values only - consult specification sheet)
N Av = Not available, N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability: Slow decomposes releases Chorine Gas into the vapour space above the product.

Conditions to avoid: Avoid storing in enclosed / confined spaces. Ensure good ventilation. Store at <30°C in dry conditions. Keep containers closed. Do not heat and dry, as the Dihydrate will be lost, and it will become Class 5.1 Oxidising Agent.

Incompatible materials: Acid conditions. Strong Oxidising Agents. Reactive metals such as: Zinc, Tin, Magnesium. Aluminium and their alloys. Oxidisable organic chemicals. Ammonium salts.

Hazardous decomposition products: Contact with Acids releases toxic Chlorine gas. Slow decomposition (from an open container) releases Chlorine Gas. If fully decomposed it will finally release Oxides of Nitrogen (NOx) and Carbon Dioxide (CO2).

Hazardous reactions: Reacts with metals such as Zinc, Tin, Magnesium, Aluminium & their alloys to release flammable Hydrogen gas. Reacts with oxidisable organic chemicals releasing high heat that may result in a fire.

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:

Acute Effects

Inhalation: Harmful if inhaled. Material is an irritant to mucous membranes and respiratory tract.

Skin contact: Contact with skin will result in irritation.

Ingestion: Harmful if swallowed. Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.

Eye contact: An eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Acute toxicity

Inhalation: This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): $1.0 < LC_{50} \leq 5.0$ mg/L for dust.

Skin contact: This material has been classified as not hazardous for acute dermal exposure. Acute toxicity estimate (based on ingredients): $LD_{50} > 2{,}000$ mg/Kg bw

Ingestion: This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): $300 < LD_{50} \leq 2{,}000$ mg/Kg bw

Corrosion/Irritancy: Eye: this material has been classified as a Category 2 Hazard (reversible effects to eyes). Skin: this material has been classified as a Category 2 Hazard (reversible effects to skin).

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as not an aspiration hazard.

Specific target organ toxicity (single exposure): This material has been classified as a Category 3 Hazard. Exposure via inhalation may result in respiratory irritation.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as a Category Acute 1 Hazard. Acute toxicity estimate (based on ingredients): ≤ 1 mg/L

Chronic aquatic hazard: This material has been classified as a Category Chronic 1 Hazard. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): <1 mg/L, where the substance is not rapidly degradable and/or BCF ≥ 500 and/or log K_{ow} ≥ 4.

Ecotoxicity in the soil environment: This material has been classified as non-hazardous.

Ecotoxicity to terrestrial vertebrates: This material has been classified as non-hazardous.

Ecotoxicity to terrestrial invertebrates: This material has been classified as non-hazardous.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT
Classified as Dangerous Goods by the criteria of the “Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

UN No:	2465
Dangerous Goods Class:	5.1
Packing Group:	II
Hazchem Code:	1W
Emergency Response Guide No:	31
Limited Quantities	5 kg
Proper Shipping Name:	DICHLOROISOCYANURIC ACID, DRY

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1). Note 1: Materials that are fire risks are incompatible with oxidising agents (Class 5.1) or organic peroxides (Class 5.2). Exemptions may apply.

MARINE TRANSPORT
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.

UN No:	3077
Dangerous Goods Class:	9
Packing Group:	III
Limited Quantities:	5 kg
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SODIUM DICHLORO ISOCYANURATE DIHYDRATE)

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

UN No:	3077
Dangerous Goods Class:	9
Packing Group:	III
Limited Quantities:	30 kg G
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SODIUM DICHLORO ISOCYANURATE DIHYDRATE)

15. REGULATORY INFORMATION

This material is not subject to the following international agreements:
Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
International Convention for the Prevention of Pollution from Ships (MARPOL)

This material is subject to the following international agreements:
Basel Convention (Hazardous Waste)

- Halogenated organic solvents

This material/constituent(s) is covered by the following requirements:

NZ EPA Status: All components of this product are listed on or exempt from the New Zealand Inventory of Chemical (NZIoC).

EPA Group Standard: HSR002684 - Water Treatment Chemicals (Subsidiary Hazard) Group Standard 2020

16. OTHER INFORMATION

Reasons for issue:	Revised Change in Personal Protection Requirements Change in Handling & Storage Requirements Change in Formulation Change in Physical Properties Change in Hazardous Substance Classification

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.