STABILISER

ChemWatch Material Safety Data Sheet (REVIEW)
CHEMWATCH 21930
Date of Issue: Fri 6-Oct-2000

IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

Not classified as hazardous according to Worksafe Australia criteria.
Not considered a dangerous substance according to directive 67/548/EEC, point 4; and to 29 CFP 1910-1200 (USA).

SUPPLIER

Company	Andrew Brands Ltd
Address	3 Porana Road, Glenfield, AUCKLAND
Telephone	0800 802 626 or 09 979 3777
Emergency Telephone	0800 243 622
Fax	0800 731 770
Website	www.andrewbrands.co.nz

CHEMWATCH HAZARD RATINGS

Flammability	0
Toxicity	2
Body Contact	1
Reactivity	0
Chronic	0

SCALE Min/Nil =0 Low =1 Moderate=2 High=3 Extreme=4

PERSONAL PROTECTION EQUIPMENT FOR INDUSTRIAL / COMMERICAL ENVIROMENTS

Short Gloves
Overalls
Goggles or Full Face Respirator

Product Name	Pool Pride Pool Stabiliser
Other Names	Cyanuric acid
CAS RN No (s)	108-80-5
UN Number	None
Packing Group	None
Dangerous Goods Class	None
Subsidiary Risk	None
Hazchem Code	None
Posions Schedule Number	S5

USE

Used as intermediate for chlorinated bleaches, selective herbicide, whitening agents. Swimming pool sanitiser. Material is mixed and used in accordance with manufacturers directions.

PHYSICAL DESCRIPTION / PROPERTIES

APPEARANCE

Odourless, light grey to white crystalline solid. Slight bitter taste. Slightly soluble in water = 0.5% @ 20 C. but soluble in hot water and acids. Insoluble in alcohol, acetone. Decomposes to toxic cyanic acid at 320 C. Available in anhydrous form or as dihydrate.

Boiling Point	Not applicable.
Melting Point	Decomposes.
Vapour Pressure (kPa)	Not applicable
Specific Gravity	2.50 (anhydrous)
Flash Point (deg C)	Non Flammable
Lower Explosive Limit (%)	Not applicable
Upper Explosive Limit (%)	Not applicable
Solubity in Water (g/L)	Partly miscible

INGREDIENTS

NAME	CAS RN	%
Isocyanuric acid	108-80-5	> 98

HEALTH HAZARD

ACUTE HEALTH EFFECTS

SWALLOWED
The solid/dust is discomforting to the gastro-intestinal tract and is harmful if swallowed. Considered an unlikely route of entry in commercial/industrial environments. Single and repeated dose studies in animals by oral and skin routes of cyanuric acid and some cyanurates generally show a low degree of toxicity. Biochemical and haematological changes were not found in any studies although at high doses several studies showed kidney damage (dystrophic changes, dilation of distal collecting tubules and Bellini's duct, fibrosis and focal areas of epithelial proliferation). Short-term administration of derivatives of s-triazines cause structural damage to the liver of test animals. The significance of these results (if any) for human exposure cannot, as yet, be determined. [Foltinova etal - Folia Histochemica 1971]. The s-triazines appear to act at the level of carbohydrate metabolism. The chlorinated, methoxy and methylthio derivatives inhibit starch accumulation by blocking sugar production. The s-triazines also cause the disappearance of sucrose and glyceric acid with the formation of aspartic and malic acids.

EYE
The dust is extremely discomforting to the eyes and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Instillation of 20 mg for 24 hours to rabbit eye caused slight irritation whilst instillation with 500 mg for 24 hours produced marked irritation.

SKIN
The material is discomforting to the skin and is capable of causing skin reactions which may lead to dermatitis. Open cuts, abraded or irritated skin should not be exposed to this material.

INHALED
The dust is highly discomforting to the upper respiratory tract. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

CHRONIC HEALTH EFFECTS
Principal routes of exposure are usually by skin contact and inhalation of generated dust. When sodium isocyanurate was administered to rats in drinking water for 90 days at doses of 400, 1200 and 5375 ppm no adverse health effects were seen other than the development of bladder calculi in high doses males. These calculi produced irritation of the urinary tract. Rats fed 0.8% and 8% sodium isocyanurate for 20 weeks showed toxic effects at the higher level with fatalities recorded. Autopsy revealed changes in the kidney related to the "diuretic effects of cyanuric acid". Treatment related mortalities were seen in rats following administration of 5375 ppm sodium isocyanurate in the drinking water during the first 12 months of a 2-year carcinogenicity study. Death was due to uraemia caused by blockage of the urethra caused by the formation of urinary calculi. Haemorrhage and inflammation of the bladder epithelium as well as renal necrosis were also observed in high-dose animals. These effects were also thought to be due to irritation produced by calculi.

FIRST AID

SWALLOWED
If poisoning occurs, contact a doctor or Poisons Information Centre.
In Australia phone 13 1126; New Zealand 03 4747000
1: DO NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
2: Observe the patient carefully.
3: Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
4: Give water (or milk) to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
5: Seek medical advice.

EYE
If this product comes in contact with the eyes:
1: Immediately hold the eyes open and wash with fresh running water.
2: Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
3: If pain persists or recurs seek medical attention.
4: Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN
If product comes in contact with the skin:
1: Immediately remove all contaminated clothing, including footwear (after rinsing with water).
2: Wash affected areas thoroughly with water (and soap if available).
3: Seek medical attention in event of irritation.

INHALED
1: If dust is inhaled, remove to fresh air.
2: Encourage patient to blow nose to ensure clear breathing passages.
3: Ask patient to rinse mouth with water but to not drink water.
4: Seek immediate medical attention. or
1: If fumes or combustion products are inhaled: Remove to fresh air.
2: Lay patient down. Keep warm and rested.
3: If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
4: Transport to hospital, or doctor.

ADVISE TO THE DOCTOR
Treat symptomatically.

PRECAUTIONS FOR USE

EXPOSURE STANDARDS

CEL TWA: 1.9 ppm, 10 mg/m3 (total); 0.955 ppm, 5 mg/m3 (respirable) (compare WEEL TWA)
A no-effect level of 154 mg/kg during the first 12 months of a chronic ingestion study with rats has lead to the establishment of a workplace environmental exposure standard (WEEL) by the AIHA. At this level a 70 kg adult could ingest 10.7 gm/day without adverse effect. This is equivalent to a time-weighted average inhalation exposure of 1070 mg/m3.

ENGINEERING CONTROLS

Use in a well-ventilated area
1: Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
2: Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.
3: If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:
(a): particle dust respirators, if necessary, combined with an absorption cartridge;
(b): filter respirators with absorption cartridge or canister of the right type;
(c): fresh-air hoods or masks
3: Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding.
4: Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

PERSONAL PROTECTION

EYES
Chemical goggles. Full face shield.
DO NOT wear contact lenses. Contact lenses pose a special hazard; soft contact lenses may absorb irritants and all lenses concentrate them.

HANDS / FEET
Wear chemical protective gloves. eg. PVC gloves with barrier cream Wear safety footwear.

OTHER
1: Overalls.
2: Eyewash unit.

RESPIRATOR

Protection Factor	Half Face Respirator	Full Face Respirator	Powered Air Respirator
10 x ES	P1	-	PAPR-P1
	Air-line*	-	-
50 x ES	Air-line**	P2	PAPR-P2
100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information, consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

SAFE HANDLING

STORAGE AND TRANSPORT

SUITABLE CONTAINER
Plastic container
Multi-ply woven plastic or paper bag with sealed plastic liner
NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.
Check that containers are clearly labelled.
Packaging as recommended by manufacturer.

STORAGE INCOMPATIBILITY
Segregate from oxidising agents.
Avoid contamination of water, foodstuffs, feed or seed.
Reacts violently with ethanol.

STORAGE REQUIREMENTS
1: Store in original containers.
2: Keep containers securely sealed.
3: Store in a cool, dry, well-ventilated area.
4: Store away from incompatible materials and foodstuff containers.
5: Protect containers against physical damage and check regularly for leaks.
6: Observe manufacturer's storing and handling recommendations.

TRANSPORTATION
No restrictions known.

SPILLS AND DISPOSAL

MINOR SPILLS
DO NOT touch the spill material
1: Clean up all spills immediately.
2: Avoid contact with skin and eyes.
3: Wear impervious gloves and safety glasses.
4: Use dry clean up procedures and avoid generating dust.
5: Vacuum up or sweep up.
6: Place spilled material in clean, dry, sealable, labelled container.

MAJOR SPILLS
Restrict access to area. DO NOT touch the spill material.
1: Clear area of personnel and move upwind.
2: Alert Fire Brigade and tell them location and nature of hazard.
3: Control personal contact by using protective equipment and dust respirator.
4: Prevent spillage from entering drains, sewers or water courses.
5: Recover product wherever possible. Avoid generating dust.
6: Sweep / shovel up.
7: If required, wet with water to prevent dusting.
8: Put residues in labelled plastic bags or other containers for disposal.
9: Wash area down with large quantity of water and prevent runoff into drains.
10:If contamination of drains or waterways occurs, advise emergency services.

DISPOSAL
1: Recycle wherever possible or consult manufacturer for recycling options.
2: Consult State Land Waste Management Authority for disposal.
3: Bury residue in an authorised landfill.
4: Recycle containers if possible, or dispose of in an authorised landfill.

FIRE/EXPLOSION HAZARD
1: Non combustible.
2: Not considered to be a significant fire risk, however containers may burn.
3: In a fire may decompose on heating and produce toxic / corrosive fumes.
Decomposes on heating and produces toxic fumes of carbon monoxide (CO), carbon dioxide (CO_2) nitrogen oxides (NOx) and toxic cyanides.

CONTACT POINT

In the event of a chemical event of a chemical incident phone **0800 243 622** for immediate assistance.

AUSTRALIAN POISONS INFORMATION CENTRE

24 HOUR SERVICE:	13 11 26
POLICE, FIRE BRIGADE OR AMBULANCE:	000

NEW ZEALAND POISONS INFORMATION CENTRE

24 HOUR SERVICE:	0800 POISON or +643 353 0199
NZ EMERGENCY SERVICES:	111

End of Report

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