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MATERIAL SAFETY DATA SHEET

Revision No: 0

Date Revised: February 12, 2001 Date Issued: February 25, 2004

PRODUCT NAME: MULTIFLOC C1400

CHEMICAL NAME: Cationic flocculating agent

Multifloc C1400 is a proprietary product. Consequently this MSDS has been written to comply with Section 8, clauses 8.30 – 8.54 of Worksafe Australia's 'National Code Of Practice For The Preparation Of Material Safety Data Sheets' – NOHSC:2011(1994), with respect to the disclosure of commercially confidential information.

Not classified as Hazardous according to the criteria of Worksafe Australia.

UN No.: None	HAZCHEM: None	DG CLASS: None Allocated
Poison Schedule: None	Packaging Group: None	EPG: None

Product Uses: Used as a very effective and efficient flocculating agent as part of a waste water treatment system to maximise clarification and sludge dewatering.

Ingredients:

Name:	CAS Number:	Proportion:
Alkaline Salt		>60%
Ingredients determined not to be hazardous		to 100%

PHYSICAL DATA

Appearance & odour:	White odourless powder
Molecular weight:	Not available
Boiling point (°C):	Not applicable
Melting point (°C):	Decomposes at above 600
Density (kg/m ³):	1.46 - 1.52 at 25°C
pH (7 = neutral):	3.4 at 25°C of a 1% w/w aqueous solution
Vapour pressure (kPa):	Not applicable
Relative vapour density (air = 1):	Not applicable
Volatile by weight (%):	41
Solubility in water:	Very soluble
Evaporation rate: (n-butyl acetate = 100)	Not applicable

FIRE AND EXPLOSION HAZARD DATA

Flash point (°C):	Material is non-flammable and non-combustible.
Auto ignition point (°C):	Not applicable.
Explosion Limits In Air (% by volume)	
Lower:	Not applicable.
Upper:	Not applicable.
Extinguishing media:	Compatible with foam, CO ₂ , and dry chemical.
Special Procedures:	None.
Unusual hazards:	Slippery when spilt and in contact with moisture.
Conditions to avoid:	High moisture environment as material may react with water to produce corrosive sulphuric acid. Extreme temperatures.
Materials to avoid:	Strong bases and strong oxidising agents. Continuous and prolonged contact with metals such as aluminium, copper and mild steel in the presence of water, will have corrosive effect.
Decomposition products:	When heated to decomposition, will emit water vapour and toxic oxide fumes.
Hazardous polymerisation:	Will not occur.
Label safety and risk phrases:	None. Not classified as Hazardous according to the criteria of Worksafe Australia.

HEALTH HAZARD DATA

Threshold limit value:	TWA 2 mg/m ³ (as mist or dry solids)
TWA: the Time-Weighted Average airborne concentrations over an eight-hour, for a five-day working week over an entire working life.	

EFFECTS OF EXPOSURE

ACUTE:

Eyes (Contact) :	May cause irritation that may result in inflammation and redness.
Skin (Contact & absorption):	May cause irritation.
Inhalation (breathing):	Inhalation of dust may cause irritation to the upper respiratory tract. Coughing and a sore throat may result.
Ingestion (swallowing):	Swallowing may result in burning of mouth, throat and stomach, resulting in abdominal pain, vomiting and diarrhea. In very large doses, may lead to muscle spasms and kidney injury.

CHRONIC

Prolonged or repeated exposure may cause allergic reactions. Prolonged inhalation has also been known to cause scarring of upper lung tissue. Repeated ingestion may cause phosphate deficiency, which can weaken bones.

FIRST AID

Eyes (contact):	While keeping eyes open, irrigate with copious amounts of water for at least 15 minutes. If irritation continues, immediately seek medical attention.
Skin (contact):	Remove contaminated clothing. Wash contaminated areas with plenty of water and soap.
Inhalation (breathing):	Move immediately to fresh air and clear any blocked airways. Keep casualty warm, at rest and in a comfortable position until fully recovered. Seek medical attention if effects persist.
Ingestion (swallowing):	DO NOT induce vomiting. Rinse mouth with copious quantities of water. Give fresh water to drink. Seek medical attention immediately. Note: DO NOT give water to unconscious patient.
Advice to doctor:	Contact a Poisons Information Centre. Product is a strong astringent.
Toxicity data:	(ex "Sax's, Dangerous Properties of Industrial Materials" Ed. 8) - skn-rat LD50: 400 mg/kg orl-rat LD50: 124 mg/kg ipr-mus LD50: 1735 mg/kg orl-mus LD50: 6207 mg/kg scu-mus LDLo: 27371 µg/kg (30D male):REP
Safety Profile:	Mildly toxic by ingestion and intraperitoneal route. A mild respiratory and eye irritant.

SPILL OR LEAK PROCEDURE

Steps to be taken in case material is released or spilled: Prevent spillage from entering drains, sewers or water courses. Vacuum or sweep/shovel up. Avoid generating dust while doing so. Wear appropriate personal protective equipment. Collect spilled material in clean, dry sealable and labelled containers for disposal. Hose final trace residues to drain with large amounts of water.

Waste disposal method: Refer to local waste disposal authority.

SAFE HANDLING INFORMATION

SPECIAL PROTECTION INFORMATION

Respiratory protection:	If dust is generated, wear a dust mask.
Ventilation:	Adequate local exhaust recommended. If not available or where dust will be generated in an enclosed work environment, use local mechanical ventilation or extraction.
Protective gloves:	PVC or rubber.
Eye protection:	Safety glasses with side shields or chemical goggles.
Other protective equipment:	Overalls or full-length clothing.

SPECIAL PRECAUTIONS

Handling & storage: Handling procedures should consider minimising dust creation. Store in a well ventilated area in corrosion resistant containers. Store in cool and dry place. Avoid damp and humid conditions. Ensure the minimisation of ingress of moisture by keeping containers tightly sealed when not in use. Check for spills regularly.

Environmental impact:

Environmental fate and distribution: Not a persistent pollutant. Can cause flocculation of suspended solids in the aqueous system. If solids are flocculated and settle out, they can be expected to become a part of the natural soil profile if not collected. An initial small decrease of local pH can be expected in a small waterway. This will be transient though.

Toxicity: Very low level toxicity.

Effect on effluent treatment: This product can be and is used as a flocculating agent in waste water treatment. It will cause finely divided solids to settle out depending on other factors such as pH, from aqueous streams. May influence pH control as this material has an acidic pH in aqueous solution. It also may add to solids loading in filter cakes and present as a compressible cake.

EMERGENCY CONTACTS:

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[This MSDS consists of 4 pages, please advise if your document does not contain the same number of pages as it will not be complete]

This MSDS summarises our best knowledge of health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

Please contact the company if any further information is required.