



I - PRODUCT IDENTIFICATION AND USE

MSDS ID: 04471

PRODUCT NAME: **THOROGARD**

USE: Closed Loop Cooling Water Treatment

SUPPLIER:

JohnsonDiversey Canada, Inc.
2401 Bristol Circle
Oakville Ontario, L6H 6P1, Canada

EMERGENCY PHONE:

1-800-668-7171

WHMIS CLASSIFICATION: E

CHEMICAL FAMILY: alkali

TRADE NAME / SYNONYMS: not applicable

CHEMICAL NAME: not applicable

II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENT	% w/w	CAS #	LD50 / LC50	Route / Species
Sodium nitrite	1-5	007632-00-0	LD50 85 mg/kg	oral/rat
Sodium molybdate	1-5	007631-95-0	LD50 4000 mg/kg	oral/rat
Potassium hydroxide	0.5-1.5	001310-58-3	LD50 365 mg/kg	oral/rat

III - HANDLING AND DISPOSAL PROCEDURES

PERSONAL PROTECTIVE EQUIPMENT:

Gloves: Natural rubber, neoprene or nitrile

Eye: Safety Goggles

Footwear: as required

Respiratory: If mists are generated, use NIOSH approved mask

Other: Not normally required.

SPECIAL HANDLING PROCEDURES AND EQUIPMENT: Avoid eye and skin contact. Do not breathe mist or spray.

VENTILATION REQUIREMENTS: general ventilation

INCOMPATIBILITY (Material to Avoid): acidic materials, reducing agents, secondary amines.

SPILL PROCEDURES: Contain the spill. Do not allow the spilled product to go to drain. Mop up or soak up with absorbent clay for disposal. Wash spill area with large volumes of water.

WASTE DISPOSAL: Dispose according to municipal, provincial, and federal regulations.

STORAGE / SHIPPING REQUIREMENT: Store in a cool dry area in a closed container.

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IV - PHYSICAL PROPERTIES

APPEARANCE / ODOUR: Clear, yellow-brown liquid

S.G. / BULK DENSITY(g/cc): 1.05

pH: (concentrate): 12.5

VAPOUR PRESSURE (mmHg): 17.5 @ 20°C

VAPOUR DENSITY (air=1): not available

ODOUR THRESHOLD: not available

BOILING POINT: approx. 99°C

FREEZING POINT: not available

PERCENT VOLATILE: 90%

SOLUBILITY IN WATER: soluble

EVAPORATION RATE (water=1): approx. 1

V - TOXICOLOGICAL PROPERTIES

EFFECTS OF ACUTE EXPOSURE TO MATERIAL:

EYES: Corrosive. May cause severe irritation. May cause temporary or permanent damage if not treated promptly.

SKIN: Corrosive. May cause severe irritation.

INGESTION: Corrosive. May cause severe irritation of the digestive tract. May cause temporary or permanent damage if not treated promptly. Ingestion of large amounts can lead to nausea, vomiting, drop in blood pressure, collapse, coma and death.

INHALATION: Breathing spray or mist may cause respiratory irritation.	
LD50 (calculated): LD50 3121 mg/kg	LC50 (calculated): not available
OTHER TOXIC EFFECTS: Sodium nitrite TLV 10 mg/m3; Sodium molybdate TWA 5 mg/m3	
EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: none known	
VI - FIRST AID MEASURES	
EYES:	Flush eyes with plenty of water for at least 15 minutes. Hold eyelids open while rinsing. Contact a physician immediately.
SKIN:	Flush affected area thoroughly with water. If irritation develops, contact a physician.
INGESTION:	Drink large volumes of water. Never give anything by mouth to an unconscious patient. Do not induce vomiting. Contact a physician immediately.
INHALATION:	Remove patient to fresh air. Contact a physician
VII - FIRE AND EXPLOSION DATA	
FLAMMABLE: No	
FLASH POINT, °C: not applicable	AUTO IGNITION TEMPERATURE, °C: N/Ap.
EXTINGUISHING MEDIA: Water [] Dry Chemical [x] Carbon Dioxide [x] Foam [x] Other []	
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus.	
HAZARDOUS COMBUSTION PRODUCTS: Oxides of nitrogen.	
EXPLOSIVE SENSITIVITY TO: not applicable	
VIII - REACTIVITY DATA	
STABILITY: Stable [x] Unstable []	
CONDITIONS TO AVOID: High temperature	
INCOMPATIBILITY (Material to Avoid) : Acidic materials, reducing agents, secondary amines.	
HAZARDOUS DECOMPOSITION PRODUCTS: Heat released on contact with acids. Sodium nitrite, if mixed with secondary amines, may form potentially carcinogenic nitroso-amines.	
REACTIVITY: Not dangerously reactive	
IX - MSDS PREPARATION	
SOURCES USED: RTECS, Supplier MSDS	PREPARED BY: JohnsonDiversey Canada. Inc. Regulatory Department Industrial Division Phone (905) 829-1200
PREPARATION DATE: April 15, 2003	
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