



I - PRODUCT IDENTIFICATION AND USE

MSDS ID: 0964

PRODUCT NAME: LIQUA-SAFE**USE:** Machine Dishwashing Detergent**SUPPLIER:**JohnsonDiversey Canada, Inc.
2401 Bristol Circle
Oakville Ontario, L6H 6P1, Canada**EMERGENCY PHONE:****1-800-668-7171****WHMIS CLASSIFICATION:** D2B E**CHEMICAL FAMILY:** Chlorinated Alkali**TRADE NAME / SYNONYMS:** not applicable**CHEMICAL NAME:** not applicable

II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENT	% w/w	CAS #	LD50 / LC50	Route / Species
Potassium hydroxide	10-30	001310-58-3	LD50 273 mg/kg	oral/rat
Sodium tripolyphosphate	3-7	007758-29-4	LD50 4100 mg/kg	oral/rat
Sodium hypochlorite	1-5	007681-52-9	LD50 4445 mg/kg	oral/rat
Sodium silicate	7-13	001344-09-8	LD50 3300 mg/kg	oral/rat

III - HANDLING AND DISPOSAL PROCEDURES

PERSONAL PROTECTIVE EQUIPMENT:**Gloves:** natural rubber gloves**Eye:** safety goggles**Footwear:** not required**Respiratory:** If mists are generated, use NIOSH approved mask**Other:** rubber apron**SPECIAL HANDLING PROCEDURES AND EQUIPMENT:** Do not breathe mist, spray or vapours. Avoid eye and skin contact.**VENTILATION REQUIREMENTS:** mechanical exhaust**INCOMPATIBILITY (Material to Avoid):** Acids, reducing agents, ammonia and 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.

IV - PHYSICAL PROPERTIES

APPEARANCE / ODOUR: Clear, yellow liquid - chlorine odour**S.G. / BULK DENSITY(g/cc):** 1.30**pH:** > 13.0**VAPOUR PRESSURE (mmHg):** not applicable**VAPOUR DENSITY (air=1):** not applicable**ODOUR THRESHOLD:** not available**BOILING POINT:** approx. 100°C**FREEZING POINT:** not available**PERCENT VOLATILE:** 70%**SOLUBILITY IN WATER:** soluble**EVAPORATION RATE (water=1):** not applicable

V - TOXICOLOGICAL PROPERTIES

EFFECTS OF ACUTE EXPOSURE TO MATERIAL:**EYES:** Corrosive. May cause permanent damage if not treated promptly.**SKIN:** Corrosive. May cause temporary or permanent damage if not treated promptly.**INGESTION:** Corrosive. May cause permanent damage if not treated promptly.

INHALATION: Corrosive. Inhalation of spray or mist may cause severe respiratory irritation.	
LD50 (calculated): 964 mg/kg	LC50 (calculated): not available
OTHER TOXIC EFFECTS: TLV-CL (potassium hydroxide): 2mg/m3; TLV (Chlorine) - TWA: 0.5 ppm; STEL: 1 ppm	
EFFECTS OF CHRONIC EXPOSURE TO MATERIAL: not available	
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. Get medical attention for any breathing difficulty.
VII - FIRE AND EXPLOSION DATA	
FLAMMABLE: No	
FLASH POINT, °C: not applicable	AUTO IGNITION TEMPERATURE, °C: N/Ap
EXTINGUISHING MEDIA: Water [x] Dry Chemical [x] Carbon Dioxide [x] Foam [x] Other []	
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus.	
HAZARDOUS COMBUSTION PRODUCTS: When heated chlorine gas is generated.	
EXPLOSIVE SENSITIVITY TO: not applicable	
VIII - REACTIVITY DATA	
STABILITY: Stable [x] Unstable []	
CONDITIONS TO AVOID: high temperature	
INCOMPATIBILITY (Material to Avoid) : Acids, reducing agents, amines and ammonia.	
HAZARDOUS DECOMPOSITION PRODUCTS:	Contact with acids will produce heat and release chlorine gas. Reducing agents can generate heat releasing chlorine. Contact with ammonia and nitrogen containing compounds can produce nitrogen gas and chloramines.
REACTIVITY: not dangerously reactive	
IX - MSDS PREPARATION	
SOURCES USED: RTECS	PREPARED BY: JohnsonDiversey Canada. Inc. Regulatory Department Institutional Division Phone (905) 829-1200
PREPARATION DATE: April 15, 2003	
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