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PROFESSIONAL SUMMIT

Safety Data Sheet
Chem Care CC-5

1. IDENTIFICATION

Synonyms	**none**
CAS#	***see Part 3, below***
Material Use	**alkaline cleaner with bleach**

IN AN EMERGENCY CALL: INFOTRAC 1-800-535-5053

2. HAZARD IDENTIFICATION

GHS Class	***acute oral***	***skin corrosive***	***STOT***	***aquatic acute***
(Category)	***(4)***	***(1)***	***(3)***	***(2)***
Signal Words	***WARNING***	***DANGER***	***WARNING***	***no Signal Word***
				no Pictogram
Hazard Statements	*harmful if swallowed (H302)*	*causes severe skin burns & eye damage (H314)*	*may cause respiratory tract irritation (H335)*	*toxic to aquatic life (H401)*

GHS Precautionary Statements for Labeling

P260	**Do not breathe mist, vapors or spray.**
P262	**Do not get in eyes, on skin or on clothing.**
P264	**Wash thoroughly after handling.**
P270	**Do not eat, drink or smoke when using this product.**
P280	**Wear eye protection, protective gloves and clothing of nitrile or butyl.**
P273, P391	**Avoid release to the environment. Collect spillage.**
P313 & P333	**If skin irritation or rash occurs, get medical advice/attention.**
P304 & P340	**If inhaled, remove person to fresh air and keep comfortable for breathing.**
P305, P351, P338	**If in eyes, rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.**

3. COMPOSITION

	CAS NUMBER	%	TLV ppm / mg/m^3	LD_{50} (*mg/kg*) ORAL	LD_{50} (mg/kg) SKIN	LC_{50} ppm INHALATION
Sodium Hydroxide	1310-73-2	10-20%	2mg/m^3	over 500	not known	not known
Potassium Hydroxide	1310-58-3	5-10%	2mg/m^3	>205	>1260	not known
Sodium Hypochlorite	7681-52-9	1-5%	0.5/1.5 (as Cl)	7450	>10,000	5250
Lauramine Oxide	1643-20-5	10-20%	not listed	>2000	not known	>16mg/m^3
Sodium Polyacrylate	9003-04-7	1-5%	not listed	40,000	not toxic	not toxic
Sodium Tripolyphosphate	7758-29-4	1-5%	not listed	3100	>4640	not known
Water	7732-18-5	balance	not toxic	90,000	not toxic	not toxic

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4. FIRST AID

SKIN: Wash with plenty of water. Remove contaminated clothing and do not reuse until thoroughly laundered. Seek medical help promptly if there is persistent itching or redness in the affected area.

EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance if there is persistent irritation.

INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If victim's breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victim's head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Corrosive substance: apply first aid immediately! *Inadvertent inhalation of vomited material may seriously damage the lungs. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.*

5. FLAMMABILITY & FIRE-FIGHTING

Flash Point	cannot flash
Autoignition Temperature	cannot burn
Flammable Limits	cannot burn
Combustion Products	oxides of carbon, nitrogen, phosphorous, chlorine, hydrogen chloride, ammonia, part oxidized hydrocarbon fragments
Firefighting Precautions	as for materials sustaining fire; compatible with water; firefighters must wear SCBA
Static Discharge	cannot accumulate a static charge

6. ACCIDENTAL RELEASE MEASURES

Leak Precaution	dike to control spillage and prevent environmental contamination
Handling Spill	recover free liquid with suitable pumps; absorb residue on an inert sorbent, sweep, shovel & store in closed containers for disposal

7. HANDLING & STORAGE

Store and use away from acids & oxidizing agents. Never cut, drill, weld or grind on or near this container, whether empty or full. *Always replace drum, pail or IBC cap prior to moving the container!*

Avoid generating or breathing product vapor or mist. If mist or vapor form in use, install adequate ventilation to control airborne concentration to regulated limits (*see Part 8, below*). Avoid all skin contact & wash work clothes frequently. An eye bath & safety shower should be available near the workplace.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

Sodium Hydroxide:

ACGIH TLV	2mg/m^3	ACGIH STEL	not listed
OSHA PEL	2mg/m^3	OSHA STEL	not listed

Potassium Hydroxide:

ACGIH TLV	2mg/m^3	ACGIH STEL	not listed
OSHA PEL	not listed	OSHA STEL	not listed

Chlorine *(from sodium hypochlorite)**:***

ACGIH TLV	0.5ppm / 1.45mg/m^3	ACGIH STEL	1.0ppm / 2.9mg/m^3
OSHA PEL	0.5ppm / 1.45mg/m^3	OSHA STEL	1.0ppm / 2.9mg/m^3

Ventilation	no special mechanical ventilation required
Hands	nitrile or butyl gloves – *always confirm suitability with supplier*
Eyes	safety glasses with side shields or chemical goggles – *always protect eyes!*
Clothing	impermeable (hands, above) apron, boots, long sleeves, if splashing is possible

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9. PHYSICAL AND CHEMICAL PROPERTIES

NOTE: *for Flash Point, Autoignition Temperature & Flammable Limits see Part 5.*

Odor & Appearance	clear, yellow-green, liquid with slight odor
Odor Threshold	not known – *virtually odorless*
Vapor Pressure	as for water
Evaporation Rate (*Butyl Acetate = 1*)	as for water
Vapor Density (air = 1)	0.6 (*water*) – *no other volatile substances present*
Boiling Point	not measured – approx. 105^{o}C / 221^{o}F
Freezing Point	not measured – approx. -10^{o}C / 14^{o}F
Decomposition Temperature	not known – *apart from the loss of chlorine, will not decompose below the boiling point*
Specific Gravity	1.176 (20/20^{o}C)
Water Solubility	complete
Viscosity	not known – *thin mobile liquid*
pH	13.5 to 14 – *strongly alkaline*

10. REACTIVITY

Dangerously Reactive With	strong oxidizing agents, strong acids
Also Reactive With	any acidic material
Chemical Stability	stable; will not polymerize
Decomposes in Presence of	no decomposition triggers known
Decomposition Products	none apart from Hazardous Combustion Products
Mechanical Impact	not sensitive

11. TOXICITY INFORMATION

i. *ACUTE EXPOSURE*

Skin Contact	corrosive
Skin Absorption	slight; toxic effects unlikely by this route
Eye Contact	corrosive
Inhalation	product mist irritates respiratory passages
Ingestion	corrosive to mouth, throat and stomach
Calculated LD_{50} (oral)	1415mg/kg (rat)
Calculated LD_{50} (skin)	12,165mg/kg (rabbit) – *too little information for confidence*
LC_{50} (inhalation)	*insufficient information to calculate*

ii. *CHRONIC EXPOSURE*

General	prolonged or repeated exposure to dilute material may cause dermatitis due to removal of protective skin oils
Sensitizing	not a sensitizer
Carcinogen/Tumorigen	not known to be a tumorigen or a carcinogen in humans or animals
Reproductive Effect	no known effect on humans or animals
Mutagen	not known to be a mutagen or teratogen in humans or animals
Synergistic With	not known

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12. ECOLOGICAL INFORMATION

Sodium Hydroxide:

Bioaccumulation	not a bioaccumulator
Biodegradation	inorganic product – cannot biodegrade
Abiotic Degradation	dilutes readily in surface water, neutralising with dissolved CO_2 to sodium carbonate
Mobility in soil, water	water soluble; moves readily in soil and water; may precipitate with calcium or magnesium ions in the environment
Aquatic Toxicity	
LC_{50} (Fish 96 hr)	125mg/liter (Gambusia affinis), 45mg/liter (Oncorhynchus mykiss) – *lethal due to alkalinity*
LC_{100} (Crustacea, 48hr)	100-150mg/liter (Daphnia magna); 125-1000mg/liter (freshwater insect larvae)
EC_{50} (Algae)	*no information*
EC_{50} (Bacteria)	*no information*

NOTE: *Lethal pH for freshwater fish is pH= 9. At this pH damage occurs to their mucus coating & their gills.*

Potassium Hydroxide:

Bioaccumulation	not a bioaccumulator
Biodegradation	inorganic product – cannot biodegrade
Abiotic Degradation	dilutes readily in water & neutralizes with dissolved CO_2 & atmospheric CO_2 to potassium carbonate;
Mobility in soil, water	water soluble; moves readily in soil and water; may precipitate with calcium or magnesium ions in the environment
Aquatic Toxicity	
LC_{50} (Fish, 96hr)	178mg/liter – *for 45% product* (Gambusia affinis) – *the pH of the test medium is not reported . . .*
EC_{50} (Crustacea, 48hr)	*. . . no other ecotoxicity data available . . .*

Sodium Hypochlorite:

Bioaccumulation	sodium, hypochlorite is not a bioaccumulator
Biodegradation	cannot biodegrade
Abiotic Degradation	sunlight accelerates decomposition to NaCl & chlorine gas; contact with soil causes rapid decomposition and release of chlorine
Mobility in soil, water	water soluble; moves readily in soil and water – *rapid decomposition likely to prevent groundwater contamination . . .*
Aquatic Toxicity	
LC_{50} (Fish, 96hr)	0.033-0.097 (Culpea harengus), 0.045-0.098mg/liter (Cymatogaster aggregata), 0.23-0.052mg/liter (Oncorhynchus gorbuscha), 0.044-0.144mg/liter (Parophrys vetulus) & others
EC_{50} (Crustacea, 24hr)	2.1mg/liter (Daphnia magna), 4mg/liter (Gammarus fasciatus) & others
EC_{50} (Algae)	0.6mg/liter (Chlorella sp.), 0.4-0.6mg/liter (Dunaliella sp.), 0.095mg/liter (Skeletonema costatum)
EC_{50} (Bacteria)	3mg/liter (*sewage sludge*)[1] – *Chlorine released from sodium hypochlorite unlikely to affect performance of downstream sewage treatment facility; it will be destroyed in the sewers before the reaching the facility.*

Lauramine Oxide:

Bioaccumulation	not a bioaccumulator
Biodegradation	biodegrades readily and rapidly in the presence of oxygen; 88% in 28 days and 100% in 28 days
Abiotic Degradation	reacts with atmospheric hydroxyl radicals; estimated ½-life in air is 14 hours
Mobility in soil, water	water soluble; moves readily in soil and water
Aquatic Toxicity	
LC_{50} (Fish, 96hr)	0.8 to 7.9mg/liter (*Predicted values*)
EC_{50} (Crustacea, 96hr)	1010mg/liter (Daphnia magna)
EC_{50} (Algae)	not known
EC_{50} (Bacteria)	not known

Sodium Polyacrylate:

Bioaccumulation	poorly absorbed and water soluble; will not bioaccumulate
Biodegradation	biodegrades slowly & incompletely; rate not known
Abiotic Degradation	not known
Mobility in soil, water	water soluble but, readily precipitated on contact with magnesium or calcium ions in soil or water
Aquatic Toxicity	
LC_{50} (Fish 96 hr)	56,000mg/liter (*species of fish not given*)
LC_{50} (Crustacea, 48hr)	6000mg/liter (Daphnia magna)
EC_{50} (Algae, 72hr)	>100mg/liter (*species not given*)
LC_{50} (Microorganisms)	not known

Sodium Tripolyphosphate:

Bioaccumulation	cannot bioaccumulate
Biodegradation	cannot biodegrade; plants use phosphate as a fertilizer, removing it from the environment
Abiotic Degradation	gradual (faster in acidic medium) hydrolysis to orthophosphate (coupled to various metallic ions)
Mobility in soil, water	water soluble & may move readily through soil & the water column; *the phosphate ion precipitates in the presence of calcium or magnesium ions, so may not move far*
Aquatic Toxicity	
LC_{50} (Fish, 48hr)	1600mg/liter (Leuciscus idus)
EC_{50} (Crustacea, 50hr)	1089mg/liter (Daphnia magna)
EC_{50} (Algae)	not toxic to aquatic life – *promotes algal blooms on surface water, eventually causing eutrophication*
EC_{50} (Bacteria)	1000mg/liter (*activated sludge, domestic*)

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13. DISPOSAL CONSIDERATIONS

Waste Disposal **do not flush to sewer**; neutralize carefully with dilute acetic acid or with sodium bicarbonate; this will release chlorine gas so ventilate area thoroughly; dispose of the residue in hazardous waste facility

Containers **Drums** should be reused. Recondition and pressure test by a licensed reconditioner prior to re-use.
Pails must be vented and thoroughly dried prior to crushing and recycling.
IBCs (intermediate bulk containers): polyethylene bottle must be pressure tested & recertified at 30 months. Replace at 60 months (5 years). Steel containers must be inspected, pressure tested & recertified every 5 years.
Warning: never cut, drill, weld or grind on or near this container, even if empty.

14. TRANSPORT INFORMATION

USA 49 CFR & Canada/International TDG

Product Identification Number	**UN – 3266**
Shipping Name	**Corrosive liquid, basic, inorganic, N.O.S. (sodium hydroxide)**
Classification	**Class 8; Packing Group III**
Marine Pollution	***not a marine pollutant***
ERAP Required	***No***
Reportable Quantity (RQ)	***none***

15. REGULATIONS

Canada DSL	**on inventory**
U.S.A. TSCA	**on inventory**
Europe EINECS	**on inventory**

16. OTHER INFORMATION

Date of Preparation	**May 2015**
Date of Revision	**-**

Prepared for Tomco-Harwel, by **Peter Bursztyn**
With data from the Registry of Toxic Effects of Chemical Substances (RTECS), Hazardous Substance Data Base (HSDB), Cheminfo (CCOHS), OSHA, IUCLID Datasheets (European Chemical Substance Information System - ESIS), & others sources (below if used), as required/available

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PLEASE ENSURE THAT THIS SDS IS GIVEN TO, AND EXPLAINED TO PEOPLE USING THIS PRODUCT.