



# MATERIAL SAFETY DATA SHEET

## SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>Company Name</b> Nu-Calgon Wholesaler, Inc.	<b>Phone Number</b> (314) 469-7000 / (800) 554-5499	<b>CHEMTREC</b> (800) 424-9300		
<b>Street Address</b> 2008 Altom Court	<b>City</b> St. Louis	<b>State</b> MO	<b>Postal Code</b> 63146-4151	<b>Last Update</b> 2/25/10
<b>Product Name</b> System Cleaner, Liquid	<b>Product Number</b> 4370-08	<b>Product Use</b> Emulsifier, cleaner for closed/new systems.		<b>EPA Registration #</b> N/A

## SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Sodium metasilicate pentahydrate	1-10	10213-79-3	None established	None established
Tetrapotassium pyrophosphate (TKPP)	1-10	7320-34-5	None established	None established
Potassium hydroxide	1-10	1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>
Amphoteric surfactant	1-10	Proprietary	None established	None established
Alkylphenol ethoxylate	1-10	68412-54-4	None established	None established

## SECTION 3 – HAZARD IDENTIFICATION

**Emergency Overview:** Clear colorless to pale yellow liquid. DANGER! CORROSIVE! Causes irritation and burns of eyes and skin. Harmful if swallowed. Mist causes respiratory tract irritation and burns. PRIMARY ROUTES OF ENTRY: Eye contact, skin contact, ingestion, and inhalation. TARGET ORGANS: Eye, skin, and mucous membranes.

### Potential Health Effects

**Eyes:** Contact with the eye causes severe irritation and burns. Tearing, redness, pain, swelling, and impaired vision may occur. Greater exposures may possibly result in permanent damage.

**Skin:** Contact with skin causes severe skin irritation and burns. Soreness, redness, and destruction of skin may result. There may be a delay between the time of exposure and when the sense of irritation begins.

**Ingestion:** Ingestion of this product causes irritation and burns of the mouth, throat, esophagus, stomach, and intestine. Perforation of the esophagus, stomach, and/or intestine may occur. Abdominal pain, nausea, vomiting, diarrhea, and general gastrointestinal upset can be expected. Blood chemistry effects (hypocalcemia and hyperkalemia) may occur if a large amount of the product component, TKPP, is ingested.

**Inhalation:** Inhalation of product mist causes respiratory tract irritation and burns. Symptoms may include a burning sensation, coughing, wheezing, laryngitis, shortage of breath, headache, nausea, and vomiting. High concentrations may cause lung damage.

**Chronic Exposure:** No applicable information was found concerning any potential health effects resulting from subchronic or chronic exposure to the product. Information on the product components follows. Development of a defatting dermatitis on prolonged contact with potassium hydroxide has been reported. Chronic inhalation of alkaline solutions may result in irritation of or damage to the tissues of the respiratory system, and an increased susceptibility to respiratory illness. Following repeated exposure (13 weeks) of rats to tetrapotassium pyrophosphate in their food, the following effects were observed at high dose levels: kidney damage with changes in body weight, food consumption, clinical parameters, and organ weights.

**Carcinogenicity:** NTP: No ingredients listed in this section IARC: No ingredients listed in this section OSHA: No ingredients listed in this section

**Medical Conditions Aggravated by Exposure:** Conditions of the eye, skin, and respiratory tract may be aggravated by overexposure to alkaline products such as this product.

## SECTION 4 – FIRST AID MEASURES

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eye lids to ensure complete rinsing. Seek medical attention immediately.

**Skin:** Immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Seek medical aid. Wash clothing before reuse.

**Ingestion:** If swallowed, do NOT induce vomiting. If victim is conscious and alert, give large quantities of water. Seek medical aid immediately. Never give anything by mouth to an unconscious person.

**Inhalation:** If inhalation occurs, remove victim to fresh air. If victim is not breathing, give artificial respiration. If breathing is difficult, have a trained medical person administer oxygen. Seek medical aid.

## SECTION 5 – FIREFIGHTING MEASURES

**Flash Point:** N/A°C/N/A°F

**Autoignition Temp:** N/A°C/N/A°F

**Hazardous Products of Combustion:** No Data.

**Flammable Limits in Air:** No Data.

**Extinguishing Media:** Use extinguishing media appropriate for the surrounding fire.

**Fire and Explosion Hazards:** Product emits toxic gases under fire conditions. This product can react with amphoteric metals, such as aluminum, to produce hydrogen gas, which is flammable and/or explosive if ignited.

**Special Firefighting Procedures:** Exercise caution when fighting any chemical fire. A self-contained breathing apparatus and protective clothing are essential.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Spill or Leak:** STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Wear protective clothing and equipment as specified in Section 8. Ventilate the area of the spill. Contain the spill. Keep unnecessary and unprotected people away from the area of the spill. Recover as much liquid as possible. Do not flush caustic residues to the sewer. Absorb residue on clay, vermiculite, or other inert substance and package in a suitable container for disposal. Dispose of recovered product, if unusable, and used absorbent according to federal, state, and local regulations. US Regulations (CERCLA) require the reporting of spills and releases to soil, water, and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

## SECTION 7 – HANDLING AND STORAGE

**Handling Procedures and Equipment:** Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Wash thoroughly after handling. Keep containers closed when not in use.

**Storage Requirements:** Store product in a cool, dry, well-ventilated area away from incompatible materials.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

**Respiratory Protection:** If airborne concentrations exceed published exposure limits, use a NIOSH approved respirator in accordance with OSHA respiratory protection requirements (29 CFR 1910.134).

**Eye Protection:** Chemical splash goggles and face shield.

**Protective Clothing:** Chemical resistant gloves and protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Exposure Guidelines:** No Data.

**Specific Engineering Controls (such as ventilation, enclosed process):** Use local and/or general exhaust ventilation to maintain airborne concentrations below irritating levels or airborne exposure limits, whichever is lower. Local exhaust is generally preferred because it can control the emission of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, the most recent edition, for details. An eye wash station and safety shower should be accessible in the immediate area of use. Protective equipment should be cleaned thoroughly after each use.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical Form:</b> Liquid	<b>Freezing Point:</b> No Data.°C/No Data.°F	<b>% Volatile by Weight:</b> No Data.%
<b>Color:</b> Clear, colorless to pale yellow	<b>Vapor Density [air =1]:</b> Similar to water	<b>Evaporation Rate:</b> No Data.
<b>Odor:</b> Mild odor	<b>Vapor Pressure:</b> No Data.	<b>Specific Gravity:</b> No Data.
<b>Boiling Point:</b> No Data.°C/No Data.°F	<b>Solubility in Water:</b> Complete	<b>pH (concentrate):</b> 13.5

## SECTION 10 – STABILITY AND REACTIVITY

**Chemical Stability:** Stable

**Hazardous Polymerization:** Will not occur

**Incompatibilities:** Strong oxidizers and acids. This product will react violently with acids.

**Reactive Conditions to avoid:** Temperature extremes and incompatibles

**Decomposition Products:** Thermal decomposition or combustion may produce oxides of potassium, phosphorus, carbon, and nitrogen.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

<u>Hazardous Ingredients</u>	<u>CAS #</u>	<u>EINECS #</u>	<u>LD 50 of Ingredient</u> (Specify Species)	<u>LC50 of Ingredient</u> (Specify Species)
Sodium metasilicate	No Data.	No Data.	Oral (rat) 800 mg/Kg Dermal (rabbit) N/A	N/A
Tetrapotassium pyrophosphate (TKPP)	No Data.No Data.	No Data.	Oral (rat) 2,440 mg/Kg Dermal (rabbit) >2,000 mg/Kg	N/A
Potassium hydroxide	No Data.	No Data.	Oral (rat) 273 mg/Kg Dermal (rabbit) 1,260 mg/Kg	N/A
Amphoteric surfactant, 39% with <5% methanol	No Data.	No Data.	Oral (rat) >5 mL/Kg Dermal (rabbit) N/A	N/A
Alkylphenoethoxylate	No Data.	No Data.	Oral (rat) 510 mg/Kg Dermal (rabbit) N/A	N/A

**SECTION 12 – ECOLOGICAL INFORMATION**

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
Sodium metasilicate	96 hr LC50 (Daphnia magna): 496 mg/L 96 hr LC50 (Mosquito fish): 530 mg/L
Tetrapotassium Pyrophosphate (TKPP)	48 hr LC50 (Daphnia magna): >100 mg/L 96 hr LC50 (Rainbow trout): >100 mg/L
Potassium hydroxide	48 hr EC50 (Water flea): 60 mg/L (45.25 solution) 96 hr LC50 (Fathead minnow): 179 mg/L (45.25% solution) 96 hr LC50 (Mosquito fish): 39-56 mg/L 96 hr EC50 (Green algae): 61 mg/L (45.25% solution)
Amphoteric surfactant, 39% with <5% methanol	EC50 (Daphnia magna): >100 mg/L
Alkylphenoethoxylate, Similar product	48 hr LC50 (Daphnia): 21.4 mg/L 96 hr LC50 (Daphnia): 6.6 mg/L 96 hr LC50 (Fathead minnow): 7.7, 4.8, and 6.6 mg/L

**SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Disposal:** RCRA STATUS: Discarded product, as sold, would be considered a RCRA Hazardous Waste based on the characteristic of corrosivity. The EPA Hazardous Waste Number is D002. **DISPOSAL:** Dispose of in accordance with local, state, and federal regulations.

**SECTION 14 – TRANSPORTATION INFORMATION**

**Special Shipping Information:** No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
<b>DOT</b> (Land)	Corrosive liquid, n.o.s. (contains potassium hydroxide) Label: Corrosive	1760	III	8
<b>IMO</b> (Water)	No Data.			
<b>ICAO</b> (Air)	No Data.			

**SECTION 15 – REGULATORY INFORMATION**

<b>WHMIS Classification:</b> (Workplace Hazardous Material Information System)	Class E - Corrosive Material.
<b>SARA Title III:</b> (Superfund Amendments & Reauthorization Act)	Immediate Yes/    Delayed Yes/    Fire No/    Pressure No/    Reactivity No
<b>OSHA:</b> (Occupational Safety & Health Administration)	Hazardous
<b>TSCA:</b> (Toxic Substance Control Act)	The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.
<b>VOC:</b> (volatile Organic Compounds)	No Data.
<b>CPR:</b> (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
<b>EINECS:</b> (European Inventory of Existing Commercial Chemical Substances)	No Data.
<b>DSL / NDSL:</b> (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data.
<b>CERCLA:</b> (Comprehensive Response Compensation & Liability Act)	EPA Hazardous Substances (40 CFR 302): Chemical Name                      CERCLA Reportable Quantity (RQ) Potassium hydroxide                1,000 lb Product                                    14,815 lb (Notify the EPA of quantities exceeding this amount.)
<b>IDL:</b> (Canadian Ingredient Disclosure List)	No Data.
<b>NFPA (HMIS) Rating:</b> (Hazardous Materials Identification System)	Health = 3    Flammability = 0    Reactivity = 0    Special Hazard = None

**SECTION 16 – OTHER INFORMATION**

No Data.
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The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.