



MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 5/24/10
<u>Product Name</u> Winter-Treat	<u>Product Number</u> 4390	<u>Product Use</u> Closed systems treatment		<u>EPA Registration #</u> N/A

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	% By Wt.	CAS Number	TLV	PEL
Tetrapotassium pyrophosphate (TKPP)	1-10	7320-34-5	None Est.	None Est.
Sodium nitrite	1-10	7632-00-0	None Est.	None Est.
Sodium tolyltriazole	1-10	64665-57-2	None Est.	None Est.
Potassium hydroxide	<1	1310-58-3	Ceiling: 2 mg/m3	Ceiling: 2 mg/m3

SECTION 3 – HAZARD IDENTIFICATION

Emergency Overview: Clear purple liquid. DANGER! CORROSIVE! Causes burns of eyes. Causes skin irritation and possibly skin burns. Harmful if swallowed. Mist causes respiratory tract irritation. Target Organs: Eye, skin, and mucous membranes.

Potential Health Effects

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

Skin: Contact with skin causes irritation. Soreness, redness, and burns may result. There may be a delay between the time exposure and when the sense of irritation begins. Sodium nitrite can be absorbed through damaged skin in amounts that may produce systemic toxicity similar to that produced by ingestion, if the area of exposure and amount absorbed is large.

Ingestion: Ingestion of this product may cause irritation or burns of the mucous membranes of the mouth, throat, esophagus and stomach. This product would be considered to be toxic by ingestion because as little as 1 gram of the product component, sodium nitrite, may be fatal to human. (One gram of sodium nitrite equates to about 15 g product.) Ingestion of sodium nitrite may cause nausea, vomiting, headaches, cyanosis (bluish skin resulting from reduced oxygen-carrying capacity of the blood due to methemoglobin production), weakness, shortness of breath, a marked fall in blood pressure, collapse, convulsions, coma, and possibly death. Nitrites have shown to convert in the stomachs of lab animals to potentially carcinogenic nitrosamines. Ingestion of the large amounts of the product component TKPP can cause blood chemistry effects (hypocalcemia and hyperkalemia).

Inhalation: Inhalation of product mist may cause respiratory tract irritation. Inhalation of large amounts of product may cause systemic effects, as nitrites are readily absorbed by lung tissue.

Chronic Exposure: No application information was found concerning any potential health effects resulting from subchronic or chronic exposure to the product. Information on the product components follows. Following repeated exposure (13 weeks) of rats to the product component, 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. This product contains sodium nitrite. Repeated doses of nitrites cause a fall in blood pressure, rapid pulse, headache, and visual disturbances. Nitrites have been implicated in an increased incidence of cancer. They may react with organic amines in the body to form carcinogenic nitrosamines. Repeated or prolonged exposure to nitrites may cause methemoglobinemia (decreased oxygen-carrying capacity of the blood). Pregnant women should minimize exposure to nitrites since the developing fetus may be adversely affected by the nitrite-induced methemoglobinemia. 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.

Carcinogenicity: NTP, IARC, & OSHA had no ingredients listed in this section.

Medical Conditions Aggravated by Exposure: Due to the high pH of this product, conditions of the eye, skin, and respiratory tract may be aggravated by exposure to this product. Individuals with pre-existing diseases of the cardiovascular system and bone marrow may have increased susceptibility to the toxic effects of the product component, sodium nitrite.

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: None°F

Autoignition Temp: N/A°C/N/A°F

Hazardous Products of Combustion: Thermal decomposition or combustion may produce oxides of potassium, sodium, phosphorus, nitrogen, and carbon.

Flammable Limits in Air: No Data

Extinguishing Media: Use extinguishing media appropriate for 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: Wear appropriate personal protective equipment. Keep unnecessary and unprotected people away from the spill site. Ventilate the area of the spill, contain the spill, recover as much liquid as possible, collect the residue on a non-combustible absorbant such as sand or earth, and place the used absorbant in a suitable container. Keep combustibles (wood, paper, oil, etc.) away from spill material. Prevent entry into sewers and waterways. Dispose of recovered product, if unusable, and used absorbant according to federal, state, and local regulations. U.S. Regulations (CERCLA) require the reporting of spills and released to soil, water, and air in excess of reportable quantities. The number for the U.S. 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 mist. Use adequate ventilation. Wash thoroughly after handling. Keep containers closed when not in use. Prevent contact with clothing and other combustible materials.

Storage Requirements: Do not store near combustible materials. Protect from low temperatures.

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 impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Exposure Guidelines: 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.

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 prevent dispersion of chemicals into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid	Freezing Point: No Data°C/No Data°F	% Volatile by Weight: No Data%
Color: Clear, purple	Vapor Density [air =1]: Similar to water	Evaporation Rate: No Data
Odor: No odor	Vapor Pressure: Similar to water	Specific Gravity: 1.09-1.15g/mL
Boiling Point: No Data°C/No Data°F	Solubility in Water: Complete	pH (concentrate): 12.0-13.0

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable

Hazardous Polymerization: Will not occur.

Incompatibilities: The product component, sodium nitrite, can cause a hazardous reaction with acids, ammonium salts, amines, activated carbon, cyanides, thiocyanates, thiosulfates, reducing agents, and certain combustibles. When sodium nitrite reacts with acid, highly toxic nitrogen oxides are released.

Reactive Conditions to avoid: Prevent contact with clothing and other combustible materials. Protect from low temperatures.

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

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)
Tetrapotassium pyrophosphate (TKPP)	No Data	No Data	Oral 2440 mg/kg rat Dermal >2000 mg/Kg rabbit	No Data
Sodium nitrite	No Data	No Data	Oral 180 mg/Kg rat	Inhalation 5.5 mg/m3/4H rat
Sodium tolyltriazole	No Data	No Data	Oral 735-930 mg/Kg (50% sol.) rat Dermal >2000 mg/Kg rabbit	>1700 mg/L (tolyltriazole)
Potassium hydroxide	No Data	No Data	Oral 273 mg/Kg rat Dermal 1260 mg/Kg rabbit	No Data

SECTION 12 – ECOLOGICAL INFORMATION

<u>Hazardous Ingredients</u>	<u>Aquatic Toxicity Data</u>
Tetrapotassium pyrophosphate (TKPP)	48 hr LC50 (Daphnia magna): >100 mg/L 96 hr LC50 (Rainbow trout): >100 mg/L
Sodium nitrite	24 hr NOEC (Minnow): 17.1 mg/L 48 hr LC50 (Mosquito fish): 7.5 mg/L 96 hr LC50 (Rainbow trout): <1mg/L (flow through)
Sodium tolyltriazole 50% solution	14 day LC50 (Daphnia magna): 13 mg/L 21 day LC50 (Daphnia magna): 6 mg/L 48 hr LC50 (Daphnia magna): 246 mg/L 96 hr LC50 (Bluegill sunfish): 191 mg/L 96 hr LC50 (Rainbow trout): 24 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)

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste Disposal: RCRA Status: discarded product, as sold, would be considered a RCRA Hazardous Waste based on the characteristics of corrosivity. The EPA Hazardous Waste # is 002. Dispose of in accordance with local, state, and federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

Special Shipping Information: Label Corrosive

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

SECTION 15 – REGULATORY INFORMATION

WHMIS Classification: (Workplace Hazardous Material Information System)	Not regulated by WHMIS.
SARA Title III: (Superfund Amendments & Reauthorization Act)	[Section 302 None] [Section 311 & 312 Immediate: yes. Delayed: yes. Fire: no. Pressure: no. Reactivity: no.] [Section 313 Chemical name: Sodium nitrite. CAS # 7632-00-0. % by weight: 6.8]
OSHA: (Occupational Safety & Health Administration)	Hazardous
TSCA: (Toxic Substance Control Act)	The ingredients of this product are listed on the TSCA Chemical Substance Inventory.
VOC: (volatile Organic Compounds)	No Data
CPR: (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
EINECS: (European Inventory of Existing Commercial Chemical Substances)	No Data
DSL / NDSL: (Canadian Domestic Substance List)(Non-Domestic Substance List)	No Data
CERCLA: (Comprehensive Response Compensation & Liability Act)	EPA Hazardous Substance (40 CFR 302): Notify the EPA of quantities exceeding this amount. Sodium nitrite: 100lb. Potassium hydroxide: 1000lb. Product: 1475
IDL: (Canadian Ingredient Disclosure List)	No Data
NFPA (HMIS) Rating: (Hazardous Materials Identification System)	health: 3 Flammability: 0 Reactivity: 0 Special Hazard: None

SECTION 16 – OTHER INFORMATION

No data.

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.