

# Material Safety Data Sheet

## Section 1 Product Identification

Product Name: **Citrus Clean**

Formula type: alkaline liquid detergent

### Manufacturer's Name:

Chem-Tech, Inc.

6551 Jansen Avenue NE – Suite 106

Albertville, MN 55301

Emergency Telephone: 1-800-535-5053

Information: 1-763-417-1380

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## Section 2 Chemical Ingredients

<u>Chemical Name</u>	<u>CAS#</u>	<u>%</u>	<u>Threshold Limit Value</u>	<u>Permissible Exposure Limit</u>
Water	7732-18-5	75-85	NE	NE
Glycol ether EB	111-76-2	1-5	20 ppm skin	25 ppm skin
d-Limonene	59-89-275	1-5	NDA	NDA
Cocamide DEA	68603-42-9	1-5	NE	NE
Sodium metasilicate	6834-92-0	1-5	2 mg/m <sup>3</sup> (dust)	2mg/m <sup>3</sup> (dust)
Nonylphenol ethoxylate	9016-45-9	1-5	NE	NE
Potassium hydroxide	1310-58-3	1-5	2mg/m <sup>3</sup> TWA	2mg/m <sup>3</sup>
Tetrasodium EDTA	64-02-8	1-5	NE	NE

Balance of ingredients are not hazardous as defined by OSHA

## Section 3 Physical Data

Form: Liquid

pH as is: 12.2 - 12.7

Color: Amber

pH (1% vol): 9.4 - 9.9

Odor: Citrus

Solubility in Water: Complete

Specific Gravity (Water = 1): 1.01 - 1.02

Vapor Density (Air = 1) : >1

Boiling Point °F: approx. 212

% VOC: < 6

Evaporation Rate (Water = 1) : <1

Vapor pressure: 0.88 Hg @ 100F

## Section 4 Fire and Explosion Information

**Flash Point (Method) F:** 140F Pensky Martens Closed Cup (combustion not sustainable)

**Unusual Fire and Explosion Hazards:** Contact with soft metal can form hydrogen gas that is flammable and can form explosive mixtures with air. High temperatures may create heavy flammable vapors that may settle along ground level and low spots to create an invisible fire hazard.

**Extinguishing Agents:** Foam, carbon dioxide, dry chemical, water fog, water

**Fire fighting methods:** Evacuate area and fight fire from a safe distance. If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop a leak. Use water spray to cool adjacent structures and to protect personnel. Shut off source of flow if possible. Stay away from storage tank ends. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of storage tank due to fire. Fire fighters must wear MSHA/NIOSH approved positive pressure breathing apparatus with full face mask and full protective equipment.

**Section 5 Health Hazard Data - Signs and Symptoms of Overexposure:**

Probable Routes of Entry: Eyes, skin, inhalation

- Eyes: Direct contact will cause severe irritation and burns if not properly treated. Effects may range from mild to irreversible damage depending upon length of exposure, solution concentration and first aid measures.
- Skin: This product contains materials that can cause severe skin irritation. Prolonged or repeated contact with concentrate may result in burns. Prolonged exposure to diluted product can cause irritation.
- Inhalation: Overexposure by inhalation of misted product may lead irritation in respiratory tract, producing a burning, choking sensation. Caution should be taken to prevent atomizing or misting of this product without proper respiratory protection.
- Ingestion: Ingestion is not expected to be a primary route of exposure. Do not ingest. Material will cause severe burns in mouth, throat and stomach. Note: Aspiration is a secondary hazard and should be expected. Product will attack lining of esophagus and stomach.

Medical conditions aggravated by exposure: Pre-existing skin disorders or abrasions.

**Section 6 Emergency First Aid Procedures**

- Eyes: Check for and remove contact lenses. Flush immediately with copious amounts of water for 15 minutes while holding eyelids apart to ensure complete irrigation of eye and eyelid tissues. Take exposed individual immediately to a health care professional, preferably an ophthalmologist, for emergency first aid and further evaluation.
- Skin: Remove contaminated clothing. Immediately wash exposed area with copious amounts of water. Repeat washing. If redness or irritation occurs, seek immediate medical attention. Launder contaminated clothing before reuse.
- Inhalation: If exposure by inhalation is suspected, immediately move exposed individual to fresh air. If individual experiences nausea, headache, dizziness, has difficulty breathing or is cyanotic, seek a health care professional immediately. Administer CPR if necessary.
- Ingestion: Drink 1-2 large glasses of milk or water. Obtain immediate medical aid or call poison control. Do not induce vomiting unless directed by a physician. During vomiting there is a danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips to prevent aspiration and monitor for breathing difficulty. Gastric lavage should be performed only by qualified medical personnel. Keep affected person warm and at rest. Seek immediate medical attention or call 911.

**Section 7 Reactivity Data**

- Stability: Stable at room temperature (68F) when stored and used under proper conditions.
- Incompatibility: Avoid contact with acids and oxidizing materials.
- Hazardous Decomposition Products: Smoke, carbon dioxide, carbon monoxide
- Hazardous Polymerization: Will not occur.

**Section 8 Spill & Leak Procedures**

- Procedures for Cleanup: Wear protective gear. Small spills: Mop thoroughly and rinse with water.
- Large Spills: Evacuate area. Eliminate ignition sources. Block potential routes to water systems (sewers, streams, etc.) with inert material such as sand or dirt. Salvage for reuse if possible. Place into disposal containers. Wash down affected areas with clear water. May be RCRA regulated. Call local Emergency Response agency to report spill.

Waste Disposal: Contact the proper county, state or federal authorities. May be RCRA regulated.

### **Section 9 Special Protection Information**

Ventilation Type Required: Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as area fans may be used to reduce localized vapor/mist areas. If vapor or mist is generated when the material handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure.

Protective Gloves: Impervious gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.

Respiratory Protection: None required if airborne concentrations are maintained below threshold limits. Where misting and vapors may occur, wear an MSHA/NIOSH approved half mask form organic vapor air purifying respirator.

Eye Protection: Eye protection must be worn. Wear safety glasses with side shields or vented splash proof goggles.

Other Equipment: Suggested: Water source for eye and skin wash and rubber boots to keep feet dry.

### **Section 10 Special Precautions**

Product should be stored between 40 and 95°F. Store out of direct sunlight. Keep out of reach of children. Keep container closed when not in use. For industrial and institutional use only. Mix only with water. Thoroughly rinse empty containers before disposal. Use only in well ventilated area. Do not breathe vapors. Wash hands thoroughly after handling.

### **Section 11 Toxicity Data**

<b><u>Ingredient</u></b>	<b><u>LD50 - Oral</u></b>	<b><u>LD50 – skin absorption</u></b>	<b><u>LC50 - Inhalation</u></b>	<b><u>Effects</u></b>
Glycol ether EB	470 mg/kg (rat)	220 mg/kg	450 ppm/4 hr (rat)	ND
d-Limonene	>5 gm/kg (rat)	>5 gm/kg	RD50 > 1000	Severe eye irritant
Cocamide DEA	12400 µL/kg	Moderate irritation	ND	Minimal eye irritation
Sodium metasilicate	1153 mg/kg (rat)	ND	ND	Corrosive
Nonylphenol ethoxylate	ND	ND	ND	ND
Potassium hydroxide	273 mg/kg (rat)	Severe (human)	ND	Corrosive
Tetrasodium EDTA	ND	ND	ND	Moderate irritant, eye & skin

#### **Carcinogenicity:**

<b><u>Ingredient</u></b>	<b><u>NTP</u></b>	<b><u>IARC</u></b>	<b><u>OSHA</u></b>
Glycol ether EB	No	No	No
d-Limonene	No	No	No
Cocamide DEA	ND	ND	ND
Sodium metasilicate	No	No	No
Nonylphenol ethoxylate	No	No	No
Potassium hydroxide	No	No	No
Tetrasodium EDTA	No	No	No

**Other effects:**

<b><u>Ingredient</u></b>	<b><u>Reproductive Toxicity</u></b>	<b><u>Teratogenicity</u></b>	<b><u>Mutagenicity</u></b>
Glycol ether EB	See note below	Laboratory animals effected	ND
d-Limonene	No	No	No
Cocamide DEA	ND	ND	ND
Sodium metasilicate	No	No	No
Nonylphenol ethoxylate	ND	ND	ND
Potassium hydroxide	ND	ND	ND
Tetrasodium EDTA	ND	ND	ND

Note: Glycol ether EB – inhalation exposure to pregnant rabbits caused some toxicity to mother and fetus at 200 ppm, but no effects at 100 ppm. Rat studies indicate the rat kidneys may be the target organs for over exposure, but rat liver changes may also be evident. There is no evidence that this occurs in humans.

**Section 12 Ecological Information****Ingredient**

Glycol ether EB	Moderately biodegradable / BCF <100. When released into air, half life expected to be less than 1 day. LC50/96 hr values for fish are >100 mg/l. Not expected to be toxic to aquatic life.		
d-Limonene	May be toxic to aquatic organisms		
Cocamide DEA	Readily biodegradable		
Sodium metasilicate	breaks down into mineralized materials		
Nonylphenol ethoxylate	Biodegradable		
Potassium hydroxide	Environmental fate: ND	TLm: 80 ppm/Mosquito fish/ 24 hr./ Fresh water	
Tetrasodium EDTA	Environmental fate: ND	96 Hr LC50 bluegill sunfish: 490 mg/L (Static)	

**Section 13 Hazard Rating - HMIS**

0 = minimal    1 = minimal    2 = moderate    3 = serious    4 = severe  
 Health: 2    Reactivity: 0    Fire: 1    Personal protection equipment = B (gloves & glasses)

**Section 14 Regulatory Information****• Chemical Inventory Status - part 1 •**

<b><u>Ingredient</u></b>	<b><u>TSCA</u></b>	<b><u>EC</u></b>	<b><u>Japan</u></b>	<b><u>Australia</u></b>
Glycol ether EB	Yes	Yes	Yes	Yes
d-Limonene	Yes	Yes	Yes	Yes
Cocamide DEA	Yes	Yes	Yes	Yes
Sodium metasilicate	Yes	Yes	Yes	Yes
Nonylphenol ethoxylate	Yes	Yes	Yes	Yes
Potassium hydroxide	Yes	Yes	Yes	Yes
Tetrasodium EDTA	Yes	Yes	Yes	Yes

**• Chemical Inventory Status – part 2 •**

<b><u>Ingredient</u></b>	<b><u>Korea</u></b>	<b><u>-----Canada-----</u></b>		<b><u>Philippines</u></b>
		<b><u>DSL</u></b>	<b><u>NDSL</u></b>	
Glycol ether EB	Yes	Yes	No	Yes
d-Limonene	Yes	Yes	ND	ND
Cocamide DEA	Yes	Yes	No	Yes
Sodium metasilicate	Yes	Yes	No	Yes
Nonylphenol ethoxylate	Yes	Yes	No	Yes
Potassium hydroxide	Yes	Yes	No	Yes
Tetrasodium EDTA	Yes	Yes	No	Yes

• **Federal, State & International Regulations – part 1** •

Ingredient	---- SARA 302 ----		----- SARA 313 -----	
	RQ	TPQ	List	Chemical Catg.
Glycol ether EB	No	No	Yes	Glycol ethers
d-Limonene	No	No	No	No
Cocamide DEA	No	No	No	No
Sodium metasilicate	No	No	No	No
Nonylphenol ethoxylate	No	No	No	No
Potassium hydroxide	No	No	No	No
Tetrasodium EDTA	No	No	No	No

• **Federal, State & International Regulations – part 2** •

Ingredient	CERCLA	RCRA 261.33	TSCA 8(d)	
			Chemical Catg.	Chemical Catg.
Glycol ether EB	No	No	Yes	
d-Limonene	No	No	No	
Cocamide DEA	No	No	No	
Sodium metasilicate	No	No	No	
Nonylphenol ethoxylate	No	No	No	
Potassium hydroxide	1000	No	No	
Tetrasodium EDTA	No	No	No	

**Chemical Weapons Convention:** No **TSCA 12(b):** No **CDTA:** No

**SARA 311/312:** **Acute:** Yes **Chronic:** No **Fire:** No **Pressure:** No



**Reactivity:** No

**Section 15 Shipping Name:**

Corrosive liquid, basic, inorganic, n.o.s. (potassium hydroxide), 8, UN3266, PGIII

**Section 16 WHMIS**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Class	Description	Symbol
B3	Combustible Liquid	
E	Corrosive material	

**Section 17 Documentary Information**

Date issued: 1-07-07 Supercedes: 1-11-05 Reason for update: Total update  
 Prepared by: S. VanGrasstek Title: Chem-Tech Lab Manager Phone: 763-417-1380

**ABBREVIATIONS:** NE = NOT ESTABLISHED NDA = NO DATA AVAILABLE  
 > = GREATER THAN <= LESS THAN  
 BCF = BIOCONCENTRATION FACTOR ND = NO DATA

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