

# E<sup>3</sup>

Environmental • Effective • Economical



## Concentrated Super Duty Degreaser

# 2

Part # 997076

55 gl / drum

Formulated using MicroEmulsion 3G Technology Super Duty Degreaser is a non-toxic, non-VOC, biodegradable, microemulsion, highly concentrated cleaner/degreaser that is specially designed to address the environmental, safety and health concerns facing today's housekeeping professional. The formulated blend of ingredients combine to lift and emulsify soils, fats, oils and greases with out the use of solvents. Can be used to clean most hard surfaces such as walls, tile & grout, food processing and service areas.

### DIRECTIONS

FOR GENERAL CLEANING OF UNFINISHED FLOORS, WALLS, and FIXTURES: Dilute concentrate 4 to 8 ounces per gallon of cold water and apply with a mop, sprayer or sponge. Allow to stand a few moments and wipe off or rinse clean with water.

FOR FOOD PROCESSING AREAS and EQUIPMENT: Dilute concentrate 8 to 12 ounces per gallon of cold water. Mop, spray or sponge onto surface and allow to stand a few moments. Surfaces that come directly in contact with food require a potable water rinse; otherwise rinsing is not usually necessary.

FOR HEAVY DUTY DEGREASING and INDUSTRIAL CLEANING: Dilute concentrate 16 ounces per gallon of cold water. Mop, spray or sponge onto surface and allow to stand at least 5 minutes. Scrub or brush thoroughly and rinse with clean water.

The above directions are flexible rather than specific. Generally, a more dilute solution can be used, while for extreme conditions a less dilute solution may be needed.

### ENVIRONMENTALLY RESPONSIBLE COMPARISON

Traditional Products	E <sup>3</sup>
Ethylenediaminetetraacetate (EDTA)	None
Nonylphenol ethoxylates	None
2-Butoxyethanol	None
Sodium Phosphates	None
	Sodium Iminodisuccinate
	Linear Alcohol Ethoxylate
	Monoethanolamine
	Sodium Metasilicate
pH 12 – 14	pH 12 – 13

#### Traditional Compound Descriptions:

**Ethylenediaminetetraacetate (EDTA)** – offers very good control of hardness ions. However, it will enhance the remobilization of heavy metals in the environment. It may contain trace amount of carcinogen.

**Nonylphenol ethoxylates** – a non-ionic surfactant that is used to provide wetting and detergency. However, it is derived from a petroleum-based product. It has a suspected harmful biodegradable intermediate.

**2-Butoxyethanol** – effective water-soluble solvent to attack both water-soluble soils and water-insoluble oils and greases. However, it is a potential nose and eye irritant and may cause blood cell damage if absorbed through skin.

**Sodium Phosphates** – offer good control of hardness ions and maintain alkalinity levels. They also increase cleaning efficiency by suspending dirt. However, phosphate are plant nutrients Those promote algae blooms.

#### E<sup>3</sup> Compound Descriptions:

**Sodium Iminodisuccinate** –biodegradable environmentally responsible chelating agent that softens water and buffers pH for maximum cleaning efficiency. Awarded by the EPA with the Presidential Green Chemistry Challenge Award.

**Linear Alcohol Ethoxylate** - listed as Positive Environmental Profile surfactant on EPA design for the Environment Formulator Initiative. A non-ionic surfactant made from linear primary alcohol that biodegrades readily to compounds with low toxicity.

**Monoethanolamine** - commonly used as a low odor source of alkalinity that aids in breaking up and emulsifying fatty oils.

**Sodium Metasilicate** – controls water hardness and maintains alkalinity to build cleaning efficiency, increases cleaning efficiency by suspending dirt. Non nutritive to plants, will not cause alga blooms.

### PRODUCT SPECIFICATIONS

Dial Setting for 11 oz.	#4 (1:16) Degreasing	Abrasive:	None
Color:	Purple	Biodegradability:	Complete
Odor:	Mild, Pleasant	Solvents:	None
pH:	12.0 - 13.0	Shelf Life:	36 Months
Viscosity:	Water thin	Weight Per Gallon:	8.61 lbs. Per gallon
Foam:	Moderate	Freeze/Thaw Stability:	Keep from freezing
Flash Point:	None		



**Cavalier Inc.**

PO Box 11171 Norfolk, Va. 23517  
Phone: 757-855-6091 Fax: 757-855-1818

**MATERIAL SAFETY DATA SHEET**

N/A=Not Applicable

Prepared by: Regulatory Affairs Dept.

(Prepared According to 29 CFR 1910.1200)

Effective Date: 5/07 Revision: 3/09

**SECTION 1-PRODUCT IDENTIFICATION AND SUPPLIER INFORMATION**

**Product Name:** Super Duty Degreaser  
**Generic Name:** Degreaser  
**Chemical Family:** Detergent Blend  
**Formula:** Proprietary

**Supplier's Name:** Cavalier, Inc.  
**Supplier's Address:** PO Box 11171 Norfolk, Va. 23517  
**Supplier's Phone #:** Phone: 757-855-6091 Fax: 757-855-1818

**SECTION 2-INGREDIENT INFORMATION**

CHEMICAL NAME	CAS NO.	WT. %	PEL	TWA-TLV	STEL-TLV
Deionized Water	7732-18-5	to 100			
Sodium Metasilicate	6834-92-0	0 to 5			
Primary Alcohol Ethoxylate	84133-50-6	0 to 5			
Sodium Iminodisuccinate	144538-83-0	0 to 5			
Primary Alcohol Ethoxylate	34398-01-1	0 to 5			
Sodium Octanesulfonate	5324-84-5	0 to 5			
Monoethanolamine	141-43-5	0 to 5			
Fragrance	N/A	< 1.0			
Dye	N/A	, 0.1			

**SECTION 3-PHYSICAL DATA**

**Boiling Point (°F):** 212 F.  
**Vapor Pressure:** 20mm Hg @ 68 F.  
**% Volatile:** 85+  
**Solubility in Water:** Complete  
**Physical Description:** Thin purple liquid with characteristic odor.  
**VOC Content:** None

**Specific Gravity:** 1.031  
**Vapor Density (Air=1):** >1  
**pH:** 12.0 – 12.5  
**Evaporation Rate (Water=1):** <1

**SECTION 4-FIRE AND EXPLOSION HAZARD DATA**

**Flash Point (Method Used):** None (waterbased)  
**Upper Explosion Limit:** N/A  
**Lower Explosion Limit:** N/A  
**Extinguishing Media:** N/A  
**Special Firefighting Procedures:** Non Flammable  
**Unusual Fire and Explosion Hazards:** N/A

**SECTION 5-REACTIVITY DATA**

**Stability:** Stable  
**Hazards Decomposition Products:** Alkaline vapors in a fire.

**Hazardous Polymerization:** None  
**Incompatibility (Materials to Avoid):** Strong acids.

**SECTION 6-STORAGE AND HANDLING INFORMATION**

WARNING: Eye Irritant. May cause skin irritation with prolong or repeated contact. Avoid contact with eyes, skin and clothing. Wear rubber gloves, chemical splash goggles and protective outerwear when handling. Avoid breathing of mists. Keep out of reach of children. For use by trained personnel only. Keep container closed during storage. For institutional and industrial use only.

**SECTION 7-HEALTH HAZARDS AND FIRST AID**

**Effects of Overexposure:**  
**Skin:** Slight skin irritant. Prolonged or repeated contact may cause redness, dermatitis.  
**Eyes:** Eye irritant. Liquid and mists will cause tearing, redness, burning sensation.  
**Inhalation:** Mists may be irritating to mucous membranes in the nose, throat, and lungs.  
**Ingestion:** Irritating to the mouth and throat. May cause headache, nausea, abdominal pain, vomiting, and diarrhea.

**First Aid Procedures:**

**Skin:** Flush with water. Seek medical attention if irritation persists.  
**Eyes:** Immediately flush with large quantities of water, holding eyelids open. Seek medical attention immediately.  
**Inhalation:** Get to fresh air. Seek medical attention if irritation persists.  
**Ingestion:** Do not induce vomiting. Drink large quantities of water. Seek medical attention immediately.

**SECTION 8-SPECIAL PROTECTION INFORMATION**

**Respiratory Protection:** Use in well ventilated area.  
**Ventilation Requirements:** General ventilation sufficient.  
**Protective Gloves:** Chemical resistant rubber or neoprene.  
**Eye Protection:** Safety glasses or chemical splash goggles.  
**Other Protective Equipment:** Wear protective rubber footwear when using on floor. Wear protective outerwear when danger of mist contact may occur.

**SECTION 9-SPILL OR LEAK PROCEDURES**

**Steps to be taken in Case Material is Released or Spilled:** Floors will become slippery. Avoid walking in product. Keep unessential personnel away. Mop up or otherwise absorb and hold disposal. Avoid discharge to storm sewer or open waterways.  
**Waste Disposal Method:** Any method in accordance with local, state and federal laws. Best method is to recycle or reuse for intended purpose. Consult local authorities for disposal of large quantities in public sewer. Do not dispose of into storm drain, stream, river or to ground. Rinse container thoroughly before discarding in trash.

**SECTION 10-REGULATORY INFORMATION**

**SARA Title III - Section 311/312 -Hazard Categories:**  
 No - Fire Hazard  
 No - Sudden Release of Pressure Hazard  
 No - Reactivity Hazard  
 Yes - Immediate (acute) Health Hazard  
 No - Delayed (chronic) Health Hazard

**Shipping Information:**  
 FOR CONTAINERS > Cleaning Compound  
 FOR 1 GALLON CONTAINERS: Cleaning Compound  
 FOR CONTAINERS < 1 GALLON: Cleaning Compound

**HMIS Hazardous Materials Identification System**

<b>Health</b>	<b>2</b>
<b>Flammability</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal Protection</b>	<b>C</b>

**FOR EMERGENCY MEDICAL OR TRANSPORT INFORMATION:** CHEM-TEL, Inc. @ 800-255-3924 (24 hours, 7 days per week)

This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CAS#	Chemical Name	Percent by Weight
	None	

This product contains the following chemical(s) which have been established to be either a carcinogen or suspected carcinogen.

CAS#	Chemical Name	Percent by Weight
	None	

**SECTION 11-OTHER INFORMATION**

This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of our products either alone or in combination with other products. It is the responsibility of the user to provide a safe workplace. using the health and safety information contained herein as a guide. This company will accept no liability for damages or loss incurred from the