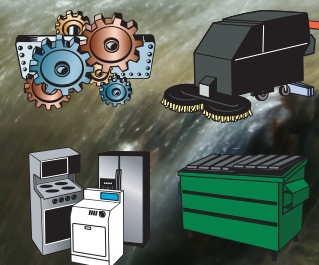


E12

elements™



environmentally responsible
maintenance solutions



Super Duty Degreaser

desengrasador estupendo del deber

Formulated using MicroEmulsion 3G Technology. Super Duty Degreaser is a low toxicity, low VOC, readily biodegradable, micro-emulsion, 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 without the use of solvents. Can be used to clean most hard surfaces such as walls, tile & grout, food processing and service areas.



1:16

General Purpose Cleaning



1:12

Food Processing Areas



1:8

Heavy Duty Degreasing

EcoLogo™
Certified Degreaser CCD-146E

ENVIRONMENTALLY RESPONSIBLE COMPARISON

Traditional Products	elements
Ethylenediaminetetraacetate (EDTA)	None
Nonylphenol ethoxylates	None
2-Butoxyethanol	None
Sodium Phosphates	None
	Sodium Iminodisuccinate
	Linear Alcohol Ethoxylate
	Monoethanolamine
	Sodium Metasilicate
pH 12 – 14	pH 10.5 – 11.5
Traditional Compound Descriptions:	elements 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.	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 algae blooms.

PRODUCT SPECIFICATIONS

Color:	Purple	Solvents:	None
Odor:	Pleasant	Abrasives:	None
pH: (Conc.)	10.5 - 11.5	Flash Point:	None
Recommended Dilution:	1:8 – 1:64	Biodegradability:	Complete
Viscosity:	Water thin	Storage/Stability:	2 years
Foam:	Moderate	Weight per Gallon:	8.61 lbs/gal.
Rinsability:	Complete with water	Freeze/Thaw Stability:	Keep from freezing

E12-1547

MATERIAL SAFETY DATA SHEET

N/A=Not Applicable

Prepared by: Regulatory Affairs Dept.

(Prepared According to 29 CFR 1910.1200)

Effective Date: 1/13 Revision: N/A

SECTION 1-PRODUCT IDENTIFICATION AND SUPPLIER INFORMATION

Manufacturer's Name: Misco Products Corporation	Product Name: elements E12 Super Duty Degreaser	Supplier's Name:
Manufacturer's Address: 1048 Stinson Drive Reading, PA 19605	Generic Name: Degreaser	Supplier's Address:
Manufacturer's Phone #: (610) 926-4106	Chemical Family: Detergent Blend	Supplier's Phone #:
	Formula: Proprietary	

SECTION 2-INGREDIENT INFORMATION

CHEMICAL NAME	CAS NO.	WT. %	PEL	TWA-TLV	STEL-TLV
Deionized Water	7732-18-5	to 100			
Sodium Xylene Sulfonate	1300-72-7	0 to 5			
Primary Alcohol Ethoxylate	34398-01-1	0 to 5			
Secondary Alcohol Ethoxylate	84133-50-6	0 to 5			
Sodium Iminodisuccinate	144538-83-0	0 to 5			
Amine Soap, Tall Oil Fatty Acid	66071-90-7	0 to 5			
Fragrance	N/A	< 1.0			
Dye	N/A	< 0.1			

SECTION 3-PHYSICAL DATA

Boiling Point (°F): 212 F.	Specific Gravity: 1.025 – 1.028
Vapor Pressure: 20mm Hg @ 68 F.	Vapor Density (Air=1): >1
% Volatile: 85+	pH: 10.5 – 11.5
Solubility in Water: Complete	Evaporation Rate (Water=1): <1
Physical Description: Thin purple liquid with light citrus odor.	
VOC Content: None	

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	Hazardous Polymerization: None
Hazards Decomposition Products: Alkaline vapors in a fire.	Incompatibility (Materials to Avoid): Strong acids.

SECTION 6-STORAGE AND HANDLING INFORMATION

CAUTION: 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. 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:	Shipping Information:	HMIS Hazardous Materials Identification System
No - Fire Hazard	FOR CONTAINERS > Cleaning Compound	Health
No - Sudden Release of Pressure Hazard		Flammability
No - Reactivity Hazard	FOR 1 GALLON CONTAINERS: Cleaning Compound	Reactivity
Yes - Immediate (acute) Health Hazard		Personal Protection
No - Delayed (chronic) Health Hazard	FOR CONTAINERS < 1 GALLON: Cleaning Compound	

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 improper handling and use of this product