




Material Safety Data Sheet

This MSDS is prepared in accordance with OSHA 29 CFR 1910.1200

	CLASS E: Corrosive liquid.	Class: Corrosive material
WHMIS (Pictograms)	WHMIS (Classification)	HCS

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	Betco High Foam Chlorinated Degreaser	Code	540
Synonym		CAS #	Mixture
Chemical Family	Not available.	Validation Date	3/26/2004
Chemical Formula	Not applicable.	Print Date	3/27/2004
Manufacturer/ Supplier	Betco Corporation 1001 Brown Avenue Toledo, Oh 43607 (419) 241-2156	In Case of Emergency	Chemtrec (800) 424-9300
TSCA	TSCA Inventory: All components listed or are exempt from listing.		
DSL/ NDSL	All components listed unless noted elsewhere on this MSDS		
Protective Clothing 			

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC ₅₀ /LD ₅₀
1) Sodium Hypochlorite	7681-52-9	0-5	Not available.	Not available.
2) Potassium Hydroxide	1310-58-3	0-5	Not available.	Not available.
3) Sodium Silicate	1344-09-8	0-5	Not available.	Not available.
4) Sodium Lauroyl Sarcosinate	137-16-6	5-10	Not available.	Not available.
5) Nonionic Surfactant	61788-90-7	0-5	Not available.	ORAL (LD50): Acute: 4610 mg/kg [Rat].
6) Soda Ash	497-19-8	0-5	Not available.	Not available.
7) Surfactant	119345-04-9	0-5	Not available.	Not available.
8) Potassium Silicate	10006-28-7	0-5	Not available.	Not available.

Section 3. Hazards Identification

Potential Acute Health Effects	Corrosive to eyes and skin. Eye contact can result in corneal damage or blindness. Skin contact may produce burns. Workers with the following conditions warrant particular attention: Persons with existing respiratory ailments such as asthma or similar should avoid contact with this product. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.
Potential Chronic Health Effects	Over-exposure by inhalation may cause respiratory irritation. Prolonged exposure may result in skin burns and ulcerations. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 4. First Aid Measures

Eye Contact	Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses, after the first 5 minutes, then continue rinsing the eye. Seek immediate medical attention.
Skin Contact	Flush with plenty of water for at least 15 minutes. Seek medical attention.
Inhalation	Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform mouth-to-mouth resuscitation. SEEK IMMEDIATE MEDICAL ATTENTION
Ingestion	Do not induce vomiting. Have conscious person drink several glasses of water or milk. NEVER give an unconscious person anything to ingest. SEEK IMMEDIATE MEDICAL ATTENTION

Section 5. Fire Fighting Measures

Products of Combustion	Chlorine
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section 6. Accidental Release Measures

Small Spill and Leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Large Spill and Leak	Corrosive liquid. Poisonous liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves.

Section 7. Handling and Storage

Precautions	Keep locked up Keep container dry. Keep away from heat. Keep away from sources of ignition. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as oxidizing agents, acids.
Incompatibility	Extremely reactive or incompatible with oxidizing agents, acids. Extremely incompatible with ammonia. Incompatible with copper alloys. Incompatible with iron.
Storage	Corrosive materials should be stored in a separate safety storage cabinet or room. Keep container in a cool, well-ventilated area. Keep away from incompatibles. Must be stored in a dry location. Not for use or storage in or around the home. Keep out of the reach of children. Keep out of the reach of children.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Local exhaust ventilation should be provided.
Personal Protection	
<i>Eyes</i>	Splash goggles or Face shield.
<i>Body</i>	Long Sleeves and Pants or overalls to avoid skin contact.
<i>Respiratory</i>	Be sure to use a MSHA/NIOSH approved respirator or equivalent. Respirator with chlorine cartridge.
<i>Hands</i>	Gloves, Butyl rubber.

**Protective Clothing
(Pictograms)**



Exposure Limits

Not available.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.	Odor	Characteristic.
Molecular Weight	Not applicable.	Taste	
pH	13 to 14 [Basic.]	Color	Yellowish. (Light.)
Boiling/Condensation Point	>100°C (212°F)		
Melting/Freezing Point	Not available.		
Critical Temperature	Not available.		
Instability Temperature	Not available.		
Specific Gravity	1.16 (Water = 1)		
Vapor Pressure	2.4 kPa (@ 20°C)		
Vapor Density	>1 (Air = 1)		
Volatility	Not available.		
VOC	Not available.		
Evaporation Rate	<1 compared to Butyl acetate.		
Dispersion Properties	See solubility in water.		
Solubility	Easily soluble in cold water, hot water.		
The Product is:	May be combustible at high temperature.		
Auto-ignition Temperature	Not available.		
Flash Points	CLOSED CUP: >98.889°C (210°F).		
Flammable Limits	Not available.		
Fire Hazards in Presence of Various Substances	Not available.		
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	Extremely reactive or incompatible with oxidizing agents, acids. Extremely incompatible with ammonia. Incompatible with copper alloys. Incompatible with iron.
Hazardous Decomposition Products	Chlorine; Hypochlorous Acid

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 3.7 mg/kg [Rat]. (Sodium 2-ethylhexyl sulfate).
Acute Effects on Humans	<p><i>Eyes</i> Extremely hazardous in case of eye contact (irritant, corrosive). Inflammation of the eye is characterized by redness, watering, and itching. Eye contact can result in corneal damage or blindness.</p> <p><i>Skin</i> Very hazardous in case of skin contact (corrosive, irritant). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.</p> <p><i>Inhalation</i> Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Over-exposure by inhalation may cause respiratory irritation.</p> <p><i>Ingestion</i> Very hazardous in case of ingestion. May be fatal if swallowed. May cause burns to mouth, throat, and stomach.</p>
Chronic Effects on Humans	Over-exposure by inhalation may cause respiratory irritation. Prolonged exposure may result in skin burns and ulcerations. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.



Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.

Section 14. Transport Information

DOT (U.S.A) (Pictograms)		
TDG Classification	Class 8: Corrosive material	
PIN UN, Proper Shipping Name, PG	Shipping name: CORROSIVE LIQUIDS, N.O.S. (Sodium Hypochlorite, Potassium Hydroxide) UNNA: 1760 PG: II	

Maritime Transportation Not available.

Special Provisions for Transport Not available.

Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification) CLASS E: Corrosive liquid.



Regulatory Lists No products were found.

Other Regulations OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications HCS (U.S.A.) Class: Corrosive material

USA Regulatory Lists

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Potassium Hydroxide: immediate health hazard

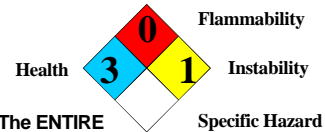
DSD (EEC)

International Regulations Lists No products were found.

Hazardous Material Information System (U.S.A.)

Health	3
Flammability	0
Physical Hazard	1

National Fire Protection Association (U.S.A.)



The Hazard Ranking systems presented on this MSDS provide only a quick reference for hazard information. The ENTIRE MSDS must be consulted to determine any specific hazards, First Aid measures, and PPE associated with this product.

Section 16. Other Information

Validated by CRushton on 3/26/2004.

Verified by CRushton.

Printed 3/27/2004.

Information Contact Betco Corporation
1001 Brown Avenue
Toledo, Ohio 43607

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Validated on 3/26/2004.

Betco High Foam Chlorinated Degreaser

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