




Material Safety Data Sheet

This MSDS is prepared in accordance with OSHA 29 CFR 1910.1200

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

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	MAD	Code	135
Synonym	Mild Acid Detergent	CAS #	Mixture.
Chemical Family	Not available.	Validation Date	3/2/2007
Chemical Formula	Not applicable.	Print Date	3/23/2007
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
Phosphoric Acid	7664-38-2	30-35	TWA: 1 (mg/m ³) TWA: 1 (mg/m ³) from OSHA (PEL) [United States] STEL: 3 (ppm)	Not available.

Section 3. Hazards Identification

Potential Acute Health Effects	Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath.
Potential Chronic Health Effects	Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 4. First Aid Measures

Eye Contact	Corrosive to eyes and skin. Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.
Skin Contact	Corrosive to eyes and skin. Remove contaminated clothing. Wash gently and thoroughly the contaminated skin with running water and non abrasive soap. Seek medical attention.
Inhalation	Get to fresh air. Seek medical attention if symptoms persist.
Ingestion	Corrosive to mouth, throat and gastrointestinal system. Do not induce vomiting. Give large quantities of water or milk. Seek medical attention immediately.

Section 5. Fire Fighting Measures

Products of Combustion Not available.

Fire Fighting Media and Instructions N/A

Special Remarks on Fire Hazards N/A

Special Remarks on Explosion Hazards N/A

Section 6. Accidental Release Measures

Small Spill and Leak Absorb with an inert material and place in an appropriate waste disposal container.

Large Spill and Leak Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Personal Protection in Case of a Large Spill Full suit. Boots. Gloves (impervious). Face shield.

Section 7. Handling and Storage

Precautions Ensure that eyewash station and safety shower is proximal to the work-station location. Avoid contact with skin and eyes Do not breathe gas/fumes/ vapor/spray.

Incompatibility Strong alkalis, oxidizers, reactive metals.

Storage Corrosive materials should be stored in a separate safety storage cabinet or room. Keep out of reach of children. This product should be stored AWAY from oxidizing materials and strong bases. Not for use or storage in or around the home.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Good general ventilation should be sufficient to control airborne levels.

Personal Protection

Eyes Splash goggles.

Body Long Pants and Long Sleeves to avoid skin contact.

Respiratory Wear appropriate respirator when ventilation is inadequate.

Hands Gloves (impervious).

Protective Clothing (Pictograms)



Exposure Limits

Phosphoric Acid

TWA: 1 (mg/m³)

TWA: 1 (mg/m³) from OSHA (PEL) [United States]

STEL: 3 (mg/m³)

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance Liquid.

Odor Odorless.

Molecular Weight Not applicable.

Taste

pH <1 [Acidic.]

Color Yellow.

Boiling/Condensation Point 218°F initial

Melting/Freezing Point Not available.

Critical Temperature	Not available.
Instability Temperature	Not available.
Specific Gravity	1.18 (Water = 1)
Vapor Pressure	<20mm Hg @ 68°F
Vapor Density	>1 (Air = 1)
Volatility	60
VOC	Not available.
Evaporation Rate	<1 compared to Water
Dispersion Properties	See solubility in water.
Solubility	Easily soluble in cold water.
The Product is:	May be combustible at high temperature.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Fire Hazards in Presence of Various Substances	Not available.
Explosion Hazards in Presence of Various Substances	Not applicable

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	Strong alkalis, oxidizers, reactive metals.
Hazardous Decomposition Products	not available

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 4610 mg/kg [Rat]. (Nonionic Surfactant).
Acute Effects on Humans	<p><i>Eyes</i> Severe eye irritant. Liquid and mist may burn or injure the eyes.</p> <p><i>Skin</i> Severe skin irritant. Prolonged or repeated contact can cause chemical burns or dermatitis.</p> <p><i>Inhalation</i> May be irritating to mucous membranes of the nose, throat, and lungs.</p> <p><i>Ingestion</i> May be irritating or corrosive to the mouth and throat. Can cause nausea and vomiting.</p>
Chronic Effects on Humans	Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death.
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 Will not occur

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. UNNA: UN1760 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.) HCS Class: Corrosive liquid.

USA Regulatory Lists

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Phosphoric Acid
SARA 313 toxic chemical notification and release reporting: Phosphoric Acid

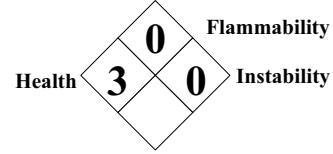
DSD (EEC) R35- Causes severe burns.

International Regulations Lists No products were found.

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

Health	3
Flammability	0
Physical Hazard	0

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. **Specific Hazard**

Section 16. Other Information

Validated by CRushton on 3/2/2007.

Verified by CRushton.

Printed 3/23/2007.

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 3/2/2007.

MAD

Page: 5/5

Continued on Next Page