



Material Safety Data Sheet

This MSDS is prepared in accordance with OSHA 29 CFR 1910.1200

	Not controlled under WHMIS (Canada).	HCS Class: Irritating substance.
WHMIS (Pictograms)	WHMIS (Classification)	HCS
Section 1. Chemical Product and Company Identification		
Product Name/ Trade name Clear Image		Code 092
Synonym Non-Ammoniated Glass/Plexiglass® Cleaner		CAS # Mixture.
Chemical Family Not available.		Validation Date 3/20/2004
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) Ethyl Alcohol	64-17-5	15-20	TWA: 1000 (ppm) TWA: 1000 (ppm) from OSHA (PEL) [United States]	ORAL (LD50): Acute: 7060 mg/kg [Rat].
2) 2-Butoxyethanol	111-76-2	0-5	TWA: 20 (ppm) from ACGIH (TLV) [United States] TWA: 50 (ppm) from OSHA (PEL) [United States]	ORAL (LD50): Acute: 1746 mg/kg [Rat].
3) Sodium Lauryl Sulfate	151-21-3	0-5	Not available.	Not available.
4) Monoethanolamine	141-43-5	0-5	TWA: 3 (ppm) TWA: 6 (ppm) from OSHA (PEL) [United States] STEL: 6 (ppm)	Not available.
5) Liquified Petroleum Gas	68476-85-7	0-5	TWA: 1000 (ppm) TWA: 1000 (ppm) from OSHA (PEL) [United States]	Not available.
6) Nonionic Surfactant	127087-87-0	0-5	Not available.	Not available.
7) Perfume Oil	N/A	0-5	Not available.	Not available.

Section 3. Hazards Identification	
Potential Acute Health Effects	No specific information is available in our database regarding the acute toxic effects of this material for humans.
Potential Chronic Health Effects	Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can produce lung damage, choking, unconsciousness or death.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 4. First Aid Measures

Eye Contact	Flush eyes with large quantities of water. Seek medical attention if irritation persists.
Skin Contact	Flush with large quantities of water. Seek medical attention if irritation persists.
Inhalation	Get to fresh air. Seek medical attention if irritation persists.
Ingestion	Drink two glasses of water. Do not induce vomiting. Seek medical attention immediately.

Section 5. Fire Fighting Measures

Products of Combustion	Not available.
Fire Fighting Media and Instructions	CO2, dry chemical, foam.
Special Remarks on Fire Hazards	N/A
Special Remarks on Explosion Hazards	Heated cans may burst.

Section 6. Accidental Release Measures

Small Spill and Leak	N/A
Large Spill and Leak	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Call for assistance on disposal.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.
Incompatibility	None known.
Storage	Keep out of the reach of children. 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.
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Personal Protection

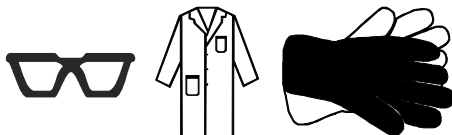
Eyes Safety glasses.

Body Lab coat.

Respiratory Not applicable.

Hands Gloves.

Protective Clothing (Pictograms)



Exposure Limits**Ethyl Alcohol**

TWA: 1000 (ppm)

TWA: 1000 (ppm) from OSHA (PEL) [United States]

2-Butoxyethanol

TWA: 25 (ppm)

TWA: 50 (ppm) from OSHA (PEL) [United States]

Monoethanolamine

TWA: 3 (ppm)

TWA: 6 (ppm) from OSHA (PEL) [United States]

STEL: 6 (ppm)

Liquified Petroleum Gas

TWA: 1000 (ppm)

TWA: 1000 (ppm) from OSHA (PEL) [United States]

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.	Odor	Characteristic.
Molecular Weight	Not applicable.	Taste	
pH	10.5 to 11.5 [Basic.]	Color	White.
Boiling/Condensation Point	N/A		
Melting/Freezing Point	Not available.		
Critical Temperature	Not available.		
Instability Temperature	Not available.		
Specific Gravity	Not available.		
Vapor Pressure	50 psig @ 68°F		
Vapor Density	>1 (Air = 1)		
Volatility	99		
VOC	Not available.		
Evaporation Rate	<1		
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	LOWER: 1.1% UPPER: 19%		
Fire Hazards in Presence of Various Substances	Not available.		
Explosion Hazards in Presence of Various Substances	Containers may explode when heated.		

Section 10. Stability and Reactivity Data

Stability The product is stable.

Incompatibility with Various Substances None known.

Hazardous Decomposition Products Will not occur.

Section 11. Toxicological Information

Routes of Entry Not available.

Toxicity to Animals Acute oral toxicity (LD50): 1746 mg/kg [Rat]. (2-Butoxyethanol).

Acute Effects on Humans

Eyes Eye irritant. Liquid and mist may damage the eyes causing corneal injury.

Skin Skin irritant. May cause moderate redness and swelling.

Inhalation May be irritating to mucous membranes of the nose, throat, and lungs.

Ingestion May cause dizziness, headache, nausea, vomiting, and diarrhea.

Chronic Effects on Humans Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can produce lung damage, choking, unconsciousness or 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 Not available.

Products of Biodegradation Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

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.

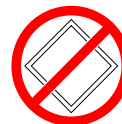
Waste Stream Not available.

Section 14. Transport Information

**DOT (U.S.A)
(Pictograms)**



TDG Classification Not controlled under TDG (Canada).



PIN UN, Proper Shipping Name, PG Not applicable.

Maritime Transportation Not available.

Special Provisions for Transport Not applicable.

Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification) Not controlled under WHMIS (Canada).



Regulatory Lists

Other Regulations Not available. or of its ingredients

Other Classifications

HCS (U.S.A.) HCS Class: Irritating substance.

USA Regulatory Lists

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
2-Butoxyethanol: immediate health hazard, delayed health hazard
SARA 313 toxic chemical notification and release reporting: 2-Butoxyethanol

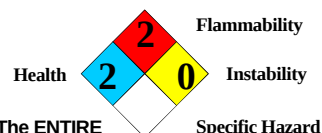
DSD (EEC) This product is not classified according to the EU regulations.

International Regulations Lists No products were found.

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

Health	*	2
Flammability		2
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.

Section 16. Other Information

Validated by CRushton on 3/20/2004.

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.

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