





# Material Safety Data Sheet

This MSDS is prepared in accordance with OSHA 29 CFR 1910.1200

 WHMIS (Pictograms)	WHMIS CLASS D-2: Material causing other toxic effects.  WHMIS (Classification)	HCS Class: Irritating substance.  HCS
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## Section 1. Chemical Product and Company Identification

Product Name/ Trade name	<b>Clear Image Concentrate</b>	Code	199
Synonym	Non-Ammoniated Glass Cleaner	CAS #	Not applicable.
Chemical Family	Not available.	Validation Date	3/22/2004
Chemical Formula	Not applicable.	Print Date	3/27/2004
Manufacturer/ Supplier	Betco Corporation 1001 Brown Avenue Toledo, Ohio 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		
<b>Protective Clothing</b> 			

## Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC <sub>50</sub> /LD <sub>50</sub>
1) 2-Butoxyethanol	111-76-2	35-40	TWA: 20 (ppm) from ACGIH (TLV) [United States] TWA: 50 (ppm) from OSHA (PEL) [United States]	ORAL (LD50): Acute: 1746 mg/kg [Rat].
2) Sodium Lauryl Sulfate	151-21-3	0-5	Not available.	Not available.
3) Sodium Xylene Sulfonate	1300-72-7	0-5	Not available.	ORAL (LD50): Acute: 650 mg/kg [Rat]. 5939 mg/kg [Mouse].
4) Perfume Oil	N/A	0-5	Not available.	Not available.

## Section 3. Hazards Identification

<b>Potential Acute Health Effects</b>	Harmful if swallowed. Harmful if absorbed through the skin.
<b>Potential Chronic Health Effects</b>	Over-exposure by inhalation may cause respiratory irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated or prolonged exposure to the substance can produce blood disorders. Repeated or prolonged exposure to the substance can produce kidney damage. Repeated or prolonged exposure to the substance can produce liver damage. Repeated or prolonged exposure to the substance can produce nervous system damage. However, in light of good industrial hygiene, exposure to any chemical should be kept to a minimum.
<b>Carcinogenic Effects</b>	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

#### Section 4. First Aid Measures

Eye Contact	Flush 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	INDUCE VOMITING by sticking finger in throat. Seek immediate medical attention.

#### 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

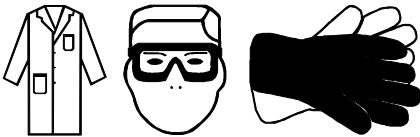
#### Section 6. Accidental Release Measures

Small Spill and Leak	Safety glasses recommended. Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill and Leak	Avoid to runoff to sewers and waterways. Wear Protective Clothing. Absorb with inert Material. Contact you local Emergency planning commission for further instructions.
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 out of reach of children. Keep locked up. For Institutional and Commercial Use
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 for most conditions. Local exhaust ventilation may be necessary for some operations.
Personal Protection	<i>Eyes</i> Splash goggles.
	<i>Body</i> No special protective clothing is required.
	<i>Respiratory</i> Wear appropriate respirator when ventilation is inadequate.
	<i>Hands</i> Gloves.
Protective Clothing (Pictograms)	
Exposure Limits	<b>2-Butoxyethanol</b> TWA: 25 (ppm) TWA: 50 (ppm) from OSHA (PEL)  Consult local authorities for acceptable exposure limits.

### Section 9. Physical and Chemical Properties

<b>Physical State and Appearance</b>	Liquid.	<b>Odor</b>	Characteristic.
<b>Molecular Weight</b>	Not applicable.	<b>Taste</b>	Not available.
<b>pH</b>	11 to 12 [Basic.]	<b>Color</b>	Blue.
<b>Boiling/Condensation Point</b>	209°F initial		
<b>Melting/Freezing Point</b>	Not available.		
<b>Critical Temperature</b>	Not available.		
<b>Instability Temperature</b>	Not available.		
<b>Specific Gravity</b>	0.96 (Water = 1)		
<b>Vapor Pressure</b>	25mm Hg @ 68°F		
<b>Vapor Density</b>	>1 (Air = 1)		
<b>Volatility</b>	100		
<b>VOC</b>	359.48 (g/l).		
<b>Evaporation Rate</b>	>1 compared to Water		
<b>Dispersion Properties</b>	See solubility in water.		
<b>Solubility</b>	Easily soluble in cold water.		
<b>The Product is:</b>	May be combustible at high temperature.		
<b>Auto-ignition Temperature</b>	Not available.		
<b>Flash Points</b>	Not available.		
<b>Flammable Limits</b>	Not available.		
<b>Fire Hazards in Presence of Various Substances</b>	No specific information is available in our database regarding the flammability of this product in presence of various materials.		
<b>Explosion Hazards in Presence of Various Substances</b>	Not applicable		

### Section 10. Stability and Reactivity Data

<b>Stability</b>	The product is stable.
<b>Incompatibility with Various Substances</b>	None known.
<b>Hazardous Decomposition Products</b>	Will not occur.

### Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	<b>WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.</b> Acute oral toxicity (LD50): 1746 mg/kg [Rat]. (2-Butoxyethanol). Acute toxicity of the gas (LC50): 926 ppm 4 hour(s) [Mouse]. (2-Butoxyethanol).
Acute Effects on Humans	<i>Eyes</i> Eye irritant. Liquid and mists may damage the eyes causing corneal injury. <i>Skin</i> Skin irritant. May cause moderate redness and swelling. <i>Inhalation</i> Vapors may be irritating to mucous membranes of the nose, throat, and lungs. <i>Ingestion</i> May cause headache, dizziness, nausea, vomiting, and diarrhea.
Chronic Effects on Humans	Over-exposure by inhalation may cause respiratory irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated or prolonged exposure to the substance can produce blood disorders. Repeated or prolonged exposure to the substance can produce kidney damage. Repeated or prolonged exposure to the substance can produce liver damage. Repeated or prolonged exposure to the substance can produce nervous system damage. However, in light of good industrial hygiene, exposure to any chemical should be kept to a minimum.
Special Remarks on Toxicity to Animals	No additional remark.
Special Remarks on Chronic Effects on Humans	No additional remark.



### 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	No additional remark.

### Section 13. Disposal Considerations

Waste Information	Any method in accordance with all applicable local, state, and federal 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) WHMIS CLASS D-2: Material causing other toxic effects.



Regulatory Lists

Other Regulations

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

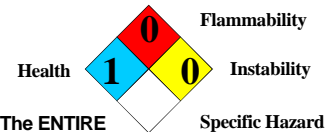
DSD (EEC) R22- Harmful if swallowed.  
R36/38- Irritating to eyes and skin.

International Regulations Lists No products were found.

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

Health	*	2
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.

### Section 16. Other Information

Validated by CRushton on 3/22/2004.

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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