



Material Safety Data Sheet

This MSDS is prepared in accordance with OSHA 29 CFR 1910.1200

	WHMIS Class D-2B: Material causing other toxic effects (TOXIC).	HCS Class: Irritating substance.
WHMIS (Pictograms)	WHMIS (Classification)	HCS

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	Forest 5	Code	307
Synonym	Cleaner/Degreaser/Deodorant	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		
		Protective Clothing	

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC ₅₀ /LD ₅₀
1) Tetrasodium salt of ethylenediaminetetraacetic acid	64-02-8	0-5	Not available.	ORAL (LD50): Acute: 3030 mg/kg [Rat].
2) 2-Butoxyethanol	111-76-2	1-5	TWA: 20 (ppm) from ACGIH (TLV) [United States] TWA: 50 (ppm) from OSHA (PEL) [United States]	ORAL (LD50): Acute: 1746 mg/kg [Rat].
3) Alkyl (C12 68%, C14 32%) dimethyl ethylbenzyl ammonium chloride	68956-79-6	0.105	Not available.	Not available.
4) Alkyl (C14 60%, C16 30%, C12 5%, C18 5%) dimethyl benzyl ammonium chloride	68391-01-5	0.105	Not available.	Not available.

Section 3. Hazards Identification

Potential Acute Health Effects	This product may irritate eyes upon contact. Irritating to the mucous membranes of the nose, throat and lungs.
Potential Chronic Health Effects	Repeated skin exposure can produce local skin destruction, or dermatitis.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 4. First Aid Measures

Eye Contact	Call a poison control center or doctor immediately for treatment advice. Hold eye open and rinse slowly and thoroughly with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
Skin Contact	Rinse skin with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for further treatment advice.
Inhalation	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration., preferably mouth to mouth if possible. Call a poison control center or doctor for further treatment advice.
Ingestion	Call a poison control center immediately for treatment advice. Have person sip a glass of water if able to swallow. Do NOT induce vomiting unless instructed to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person

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	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	After handling, always wash hands thoroughly with soap and water. Avoid contact with skin and eyes.
Incompatibility	None known.
Storage	Keep out of reach of children. For Institutional and Commercial Use

Section 8. Exposure Controls/Personal Protection

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

Personal Protection

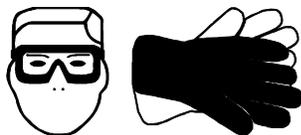
Eyes Splash goggles.

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**2-Butoxyethanol**

TWA: 25 (ppm)

TWA: 50 (ppm) from OSHA (PEL)

Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.	Odor	Pleasant.
Molecular Weight	Not applicable.	Taste	Not available.
pH	11.5 to 12.5 [Basic.]	Color	Straw color.
Boiling/Condensation Point	213°F initial		
Melting/Freezing Point	Not available.		
Critical Temperature	Not available.		
Instability Temperature	Not available.		
Specific Gravity	1.01 (Water = 1)		
Vapor Pressure	20mm Hg @ 68°F		
Vapor Density	>1 (Air = 1)		
Volatility	90		
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	CLOSED CUP: >98.889°C (210°F).		
Flammable Limits	Not available.		
Fire Hazards in Presence of Various Substances	No specific information is available in our database regarding the flammability of this product in presence of various materials.		
Explosion Hazards in Presence of Various Substances	Not applicable		

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	Eye Contact Ingestion. INHALATION Skin contact.
Toxicity to Animals	WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. 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> Severe eye irritant. Liquid and mist may cause corneal injury. <i>Skin</i> Skin irritant. Prolonged or repeated exposure may cause moderate reddening or swelling. <i>Inhalation</i> Vapors may be irritating to mucous membranes of the nose, throat, and lungs. <i>Ingestion</i> May be irritating to the mouth, throat, esophagus, and gastrointestinal system. Vomiting and diarrhea expected with large doses.
Chronic Effects on Humans	Repeated skin exposure can produce local skin destruction, or dermatitis.
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	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) WHMIS Class D-2B: Material causing other toxic effects (TOXIC).



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: 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

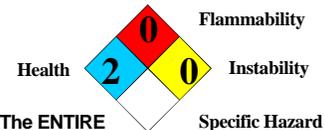
DSD (EEC)

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
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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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