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 **Duet L Laundry**

Code 475

Synonym Liquid Laundry Detergent - TopLoad

Chemical Family

Chemical Formula Not applicable.

Manufacturer/ Supplier Betco Corporation
1001 Brown Avenue
Toledo, Ohio 43607
(800) 333-2156

TSCA **TSCA Inventory: All components listed or are exempt from listing.**

DSL/ NDSL **All components listed unless noted elsewhere on this MSDS**

Version Number 1.00

Validation Date **10/25/2010**

Print Date 10/25/2010

In Case of Emergency Manufacturer 24 Hour Emergency Number
CHEMTREC (800) 424-9300

Protective Clothing

Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC_{50}/LD_{50}
Sodium Gluconate	527-07-1	1 - 5	Not available.	Not available.
Surfactant Blend		1 - 5	Not available.	Not available.
Sodium Lauryl Ether Sulfate	68891-38-3	1 - 5	Not available.	Not available.
Detergent Polymer	68479-09-4	1 - 5	Not available.	Not available.
Alcohol Alkoxylate	68439-46-3	1 - 5	Not available.	Not available.
Sodium Tetraborate	11130-12-4	1 - 5	Not available.	Not available.
Coconut Fatty Acid	61788-47-4	1 - 5	Not available.	Not available.
Ethanol	64-17-5	1 - 3	**OSHA (United States).** TWA: 1000 ppm **ACGIH (United States).** TWA: 1000 ppm **NIOSH** TWA: 1000 mg/m^3	ORAL (LD50): Acute: 3450 mg/kg [Mouse]. 7060 mg/kg [Rat].

Section 3. Hazards Identification

Potential Acute Health Effects Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Non-corrosive for skin. Non-corrosive to the eyes. Non-corrosive for lungs.

Potential Chronic Health Effects Hazardous in case of skin contact (corrosive, irritant, sensitizer), of eye contact (irritant), of ingestion, of inhalation.
CARCINOGENIC EFFECTS: Classified A4 (Not classifiable for human or animal.) by ACGIH [Ethanol].
MUTAGENIC EFFECTS Not available.
TERATOGENIC EFFECTS Not available.
DEVELOPMENTAL TOXICITY PROVEN [Ethanol]
The substance is toxic to blood, the nervous system, the reproductive system, liver, upper respiratory tract, eyes.
Repeated or prolonged exposure to the substance can produce target organs damage.

Carcinogenic Effects	Classified A4 (Not classifiable for human or animal.) by ACGIH [Ethanol].

Section 4. First Aid Measures

Eye Contact	Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
Skin Contact	After contact with skin, wash immediately with plenty of water. Seek medical attention.if irritation persists.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 5. Fire Fighting Measures

Products of Combustion	Not applicable.
Fire Fighting Media and Instructions	Not applicable.
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. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill and Leak	Absorb with an inert material and put the spilled material in an appropriate waste disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 7. Handling and Storage

Precautions	Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. 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 reducing agents, acids, alkalis.
Incompatibility	Reactive with reducing agents, acids, alkalis.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Good general ventilation should be sufficient to control airborne levels.
Personal Protection	
Eyes	Safety glasses.
Body	No special protective clothing is required.
Respiratory	A respirator is not needed under normal and intended conditions of product use.
Hands	Gloves.

Protective Clothing (Pictograms)	
Exposure Limits	See Section 2 For Applicable Exposure Limits

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Molecular Weight	Not applicable.
pH	7 to 8 [Basic.]

Odor	Pleasant.
Taste	Not available.
Color	Blue.

Boiling/Condensation Point	100°C (212°F)
Melting/Freezing Point	May start to solidify at 0°C (32°F) based on data for: Water. Weighted average: -2.93°C (26.7°F)
Critical Temperature	Not available.
Instability Temperature	Not available.
Specific Gravity	1.0378 (Water = 1)
Vapor Pressure	The highest known value is 5.3 kPa (40 mm Hg) (at 20°C) (Ethanol).
Vapor Density	>1 (Air = 1)
Volatility	
VOC	-42 (%)
Evaporation Rate	<1 compared to Butyl acetate.
Dispersion Properties	See solubility in water, methanol, acetone.
Solubility	Easily soluble in methanol, acetone. Soluble in cold water, hot water.
The Product is:	Non-flammable.
Auto-ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Not available.

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	Reactive with reducing agents, acids, alkalis.
Hazardous Decomposition Products	Not available.

Section 11. Toxicological Information

Routes of Entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	Acute oral toxicity (LD50): 3450 mg/kg [Mouse]. (Ethanol). Acute toxicity of the gas (LC50): 20000 ppm 10 hour(s) [Rat]. (Ethanol).
Acute Effects on Humans	
Eyes	Hazardous in case of eye contact (irritant). Non-corrosive to the eyes.
Skin	Sensitization of the product: Not available. Hazardous in case of skin contact (irritant). Non-corrosive for skin. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Inhalation	Non-corrosive for lungs. May cause sensitization by inhalation.
Ingestion	Hazardous in case of ingestion.
Chronic Effects on Humans	Hazardous in case of skin contact (corrosive, irritant, sensitizer), of eye contact (irritant), of ingestion, of inhalation. **CARCINOGENIC EFFECTS**: Classified A4 (Not classifiable for human or animal.) by ACGIH [Ethanol]. **MUTAGENIC EFFECTS** Not available. **TERATOGENIC EFFECTS** Not available. **DEVELOPMENTAL TOXICITY** PROVEN [Ethanol] The substance is toxic to blood, the nervous system, the reproductive system, liver, upper respiratory tract, eyes. Repeated or prolonged exposure to the substance can produce target organs damage.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.

Section 12. Ecological Information

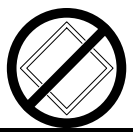
Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	These products are carbon oxides (CO, CO_2) and water.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

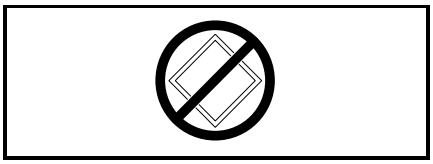
Waste Information	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream	Not available.

Section 14. Transport Information

DOT (U.S.A) (Pictograms)



TDG Classification -



PIN UN, Proper Shipping Name, PG Not applicable.

Maritime Transportation Not available.

Special Provisions for Transport Not available.

Section 15. Other Regulatory Information and Pictograms

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

Regulatory Lists CEPA DSL: Ethanol

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 This product does not contain a chemical reportable under California Prop 65.

Pennsylvania RTK: Ethanol
Florida: Ethanol
Minnesota: Ethanol
Massachusetts RTK: Ethanol
New Jersey: Ethanol

Clean air act (CAA) 112 regulated flammable substances: Ethanol

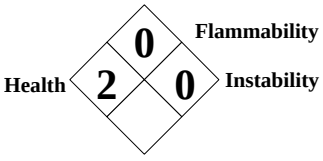
DSD (EEC) This product is not classified according to the EU regulations.

International Regulations Lists No products were found.

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

Health	*	2
Flammability		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 10/25/2010.

Verified by CRushton.

Printed 10/25/2010.

Information Contact Betco Corporation
1001 Brown Avenue
Toledo, Ohio 43607