



Material Safety Data Sheet

This MSDS is prepared in accordance with OSHA 29 CFR 1910.1200



CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
WHMIS Class D-2B: Material causing other toxic effects (TOXIC).

Class: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).
HCS Class: Irritating substance.

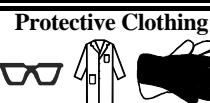
WHMIS (Pictograms)

WHMIS (Classification)

HCS

Section 1. Chemical Product and Company Identification

Product Name/ Trade name	CitruSolv HF	Code	214
Synonym	Natural Degreaser Deodorizer - High Flash	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		



Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits	LC ₅₀ /LD ₅₀
1) Petroleum Distillates	64742-96-7	60-63	TWA: 100 (ppm) TWA: 100 (ppm) from OSHA (PEL) [United States]	Not available.
2) Low Odor Base Solvent	64742-47-8	20-25	TWA: 100 (ppm) TWA: 100 (ppm) from OSHA (PEL) [United States]	Not available.
3) Citrus Terpenes	5989-27-5	10-13	Not available.	ORAL (LD50): Acute: 5000 mg/kg [Rat]. DERMAL (LD50): Acute: 5000 mg/kg [Rabbit].

Section 3. Hazards Identification

Potential Acute Health Effects	Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Non-corrosive for skin.
Potential Chronic Health Effects	Over-exposure by inhalation may cause respiratory irritation. May aggravate existing respiratory conditions such as asthma.
Carcinogenic Effects	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.
Skin Contact	Remove contaminated clothing. Wash affected areas with soap and water. Seek medical attention if irritation persists.
Inhalation	Get to fresh air. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.
Ingestion	Do not induce vomiting. Call a poison control center immediately for treatment advice. NEVER give an unconscious person anything to ingest.

Section 5. Fire Fighting Measures

Products of Combustion	Not available.
Fire Fighting Media and Instructions	Foam, CO2, or dry chemical.
Special Remarks on Fire Hazards	Avoid use of water streams.
Special Remarks on Explosion Hazards	Drums heated by a fire can explode.

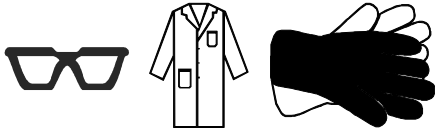
Section 6. Accidental Release Measures

Small Spill and Leak	Safety glasses. Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill and Leak	Absorb with DRY earth, sand or other non-combustible material.
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	Avoid contact with skin and eyes. DO NOT ingest. Keep away from sources of ignition.
Incompatibility	Strong oxidizers.
Storage	Combustible materials should be stored away from extreme heat and away from strong oxidizing agents. 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	
<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	Petroleum Distillates TWA: 100 (ppm) TWA: 100 (ppm) from OSHA (PEL) Low Odor Base Solvent TWA: 100 (ppm) TWA: 100 (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	Not available.	Color	Colorless.
Boiling/Condensation Point	350°F initial		
Melting/Freezing Point	Not available.		
Critical Temperature	Not available.		
Instability Temperature	Not available.		
Specific Gravity	0.8 (Water = 1)		
Vapor Pressure	<20mm Hg @ 68°F		
Vapor Density	>1 (Air = 1)		
Volatility	>90% (w/w).		
VOC	91 (%)		
Evaporation Rate	<1 compared to Water		
Dispersion Properties	Not available.		
Solubility	Not available.		
The Product is:	Flammable.		
Auto-ignition Temperature	Not available.		
Flash Points	CLOSED CUP: 62.778°C (145°F).		
Flammable Limits	LOWER: 1% UPPER: 6%		
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	Drums Heated By Fire Can explode		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	Strong oxidizers.
Hazardous Decomposition Products	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Acute Effects on Humans	<p><i>Eyes</i> Eye irritant. May cause redness, burning, or tearing.</p> <p><i>Skin</i> Prolonged or repeated contact may cause moderate irritation, defatting, and dermatitis.</p> <p><i>Inhalation</i> May be irritating to the mucous membranes of the nose, throat, and lungs. High concentrations may cause headache, dizziness, nausea, and fatigue.</p> <p><i>Ingestion</i> May be irritating to the gastrointestinal system. Nausea, vomiting, and diarrhea expected with large doses. Aspiration of material into the lungs can cause chemical pneumonitis.</p>
Chronic Effects on Humans	Over-exposure by inhalation may cause respiratory irritation. May aggravate existing respiratory conditions such as asthma.
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	3 
PIN UN, Proper Shipping Name, PG	Shipping name: Combustible Liquid NOS UNNA: 1993 PG: III
Maritime Transportation	Not available.

Special Provisions for Transport

Not available.

Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification) CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).
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Regulatory Lists No products were found.

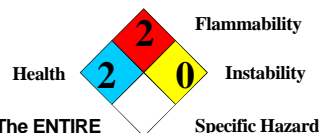
Other Regulations OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications	HCS (U.S.A.)	Class: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F). HCS Class: Irritating substance.
	USA Regulatory Lists	No products were found.
	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 3/22/2004.

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.

Validated on 3/22/2004.

CitruSolv HF

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