



VELSICOL CHEMICAL CORPORATION

Material Safety Data Sheet

NFPA 	HCS Risk Phrases Not an HCS controlled material in USA.	Protective Clothing
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Section I. Chemical Product and Company Identification	
Common Name/ Trade Name BENZOFLEX® 400	In case of Emergency In the continental U.S.A. call CHEMTREC 800-424-9300 (24 Hours) Outside of the continental U.S.A. call CHEMTREC 703-527-3887 (24 Hours)
Supplier Velsicol Chemical Corporation 10400 W. Higgins Road Rosemont, IL 60018 U.S.A. Phone (847) 298-9000 FAX (847) 298-9015	Manufacturer Velsicol Chemical Corporation 10400 W. Higgins Road Rosemont, IL 60018 U.S.A. Phone: 847-298-9000 FAX: 847-298-9015
Synonym Polypropylene Glycol Dibenzoate	Material Uses Plasticizer for adhesives, caulks, flooring and paints.
Chemical Name Poly[oxy(methyl-1,2-ethanediyl)],.alpha.-benzoyl-.omega.-(benzoyloxy)-	
Chemical Family Aromatic ester.	
Chemical Formula (C3-H6-O) _n C14-H10-O3	

Section II. Composition and Information on Ingredients				
Name	CAS #	% by Weight	TLV/PEL	OSHA Hazardous Ingredients
Polypropylene glycol dibenzoate	72245-46-5	99.8-100	Not available.	No
Water (Impurity)	7732-18-5	0-0.2	Not available.	No

Section III. Hazards Identification	
Emergency Overview	Off-white. Clear oily liquid Mild ester odor. HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES.
Potential Health Effects	Inhalation and skin contact are expected to be the primary routes of occupational exposure to Benzoflex 400. This material is not expected to cause significant adverse human health effects when good industrial hygiene and safety practices are followed.

Section IV. First Aid Measures	
Eye Contact	Flush with plenty of water. Seek medical attention if irritation persists.
Skin Contact	Flush the area with plenty of water. Remove material from clothing. Wash clothing before reuse.
Inhalation	Remove to fresh air.
Ingestion	If swallowed, induce vomiting as directed by medical personnel. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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Section V. Fire and Explosion Data

Flammability of the Product	Combustible.
Auto-Ignition Temperature	Not available.
Flash Points	OPEN CUP: 465°F (COC)
Flammable Limits	Not available.
Fire and Explosion Hazards	These products are carbon oxides (CO, CO ₂).
Fire Fighting Media and Instructions	SMALL FIRE: Use dry chemicals, CO ₂ , water spray or foam. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Section VI. Accidental Release Measures

Small Spill	Absorb with an inert material and place in an appropriate waste disposal container.
Large Spill	Stop leak if without risk. Contain spilled liquid with diking. Keep away from heat. Keep away from sources of ignition. Absorb with an inert material and put the spilled material in an appropriate waste disposal container.

Section VII. Handling and Storage

Handling	Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of material from eyes, skin and clothing. Keep away from sources of ignition.
Storage	Store in well ventilated area away from sources of ignition.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize exposure. If practical use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.
Personal Protection	Safety glasses. Lab coat. Gloves. Wear appropriate respirator when ventilation is inadequate.
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 IX. Physical and Chemical Properties

Physical state and appearance	Clear oily liquid
Color	Off-white.
Odor	Mild ester odor.
Boiling Point	Not available.
Melting Point	Not available.
Critical Temperature	Not available.
Specific Gravity	1.103 (Water = 1)
Vapor Pressure	<2 * 10 ⁻⁷ mm of Hg (@ 20°C)
Vapor Density	>11.8 (Air = 1)
Volatility	Not available.
Odor Threshold	Not available.

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Evaporation rate	Lower than 1. [Butyl acetate.]
Viscosity	Approximately 110 cP @ 25 deg C.
Solubility	Easily soluble in methanol, diethyl ether, and acetone. Slightly soluble in cold water.
pH (1% soln/water)	Not available.
Molecular Weight	approximately 400.

Section X: Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	No additional remark.
Incompatibility with various substances	Very slightly to slightly reactive with acids, alkalis. Non-reactive with oxidizing agents, reducing agents, combustible materials, organic materials, metals, moisture.
Corrosivity	Not considered to be corrosive for metals and glass according to our database.
Hazardous Polymerization	Will not occur
Hazardous Decomposition Products	Not available.

Section XI: Toxicological Information

Toxicity to Animals	Data from toxicity studies conducted by Velsicol Chemical Corporation are summarized below. Oral LD50, Rat: >5000 mg/kg, Practically non-toxic Dermal LD50, Rat: >2000 mg/kg, No more than slightly toxic Inhalation LC50, Rat: > 5.38 mg/l (4-hr aerosol), Practically non-toxic Eye irritation - Slightly irritating to rabbits (2.3/110.0) Skin Irritation - Practically non-irritating to rabbits (0.2/8.0) No allergic skin reaction was reported after repeated skin application to guinea pigs. No genetic changes were reported in standard tests using bacteria cells, both with and without mammalian metabolic activation.
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Section XII: Ecological Information

Ecotoxicology	Not available.
Chemical Fate	Not available The material is readily biodegradable (78% degradation in 28 days; shake flask method). Thin film photo degradation (UV light), half life 12 - 13 days.

Section XIII: Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local or regional authorities for disposal options.
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Section XIV: Transport Information

DOT Proper Shipping Name	NONE
DOT Hazard Class	Not a DOT controlled material (United States).
UN Identification Number	Not applicable (PIN and PG).

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DOT (Pictograms) 

Packing Group NONE

Section XV Other Regulatory Information and Pictograms

Federal and State Regulations All components of this material are listed on the TSCA Inventory

Other Classifications	WHMIS (Canada) Not a WHMIS controlled material.
	WHMIS (Canada) (Pictograms) 
	TDG (Canada) (Pictograms) 

HMIS (U.S.A.)	Health Hazard	1	National Fire Protection Association (U.S.A.) Health		Fire Hazard	1	Fire Hazard
	Reactivity	0			Reactivity		
	Personal Protection	0			Specific hazard		

Section XVI Other Information

References -LOLI Database, Chem Advisor via Micromedex Inc., 2/19/96
 -ICRMS Inventories Database, Ariel Research Corporation, 6/3/96
 -Material Safety Data Sheet, Velsicol Chemical Corporation, Dec. 1995.
 -Velsicol Chemical Corporation, unpublished studies

Other Special Considerations No additional remark.

Validated by Amy M. Bredbenner on 10/29/97. Verified by Amy M. Bredbenner.

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Revision Revised Section 7

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