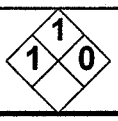
VELSICOL CHEMICAL CORPORATION

Material Safety Data Sheet

NFPA	HCS Risk Phrases	Protective Clothing
	Not controlled under the HCS (United States).	

Section I. Chemical Product and Company Identification

Common Name/ Trade Name **Benzoflex® 9-88 SG**

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	Dipropylene Glycol, Dibenzoate
Chemical Name	Propanol, oxybis-, dibenzoate
Chemical Family	Aromatic ester. (Aromatic.)
Chemical Formula	C20 H22 O5

Material Uses

Coatings: Plasticizer for adhesives, caulks, flooring and paints.

Section II. Composition and Information on Ingredients

Name	CAS #	% by Weight	TLV/PEL	OSHA Hazardous Ingredients
Dipropylene glycol dibenzoate	27138-31-4	93-99.8	Not available.	No
Dipropylene glycol monobenzoate	125457-59-2	0.1-5	Not available.	No

Section III. Hazards Identification

Emergency Overview

Off-white. (Light.) Liquid. (Clear oily liquid.) Ester-like (Slight.)

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES

Potential Health Effects

Inhalation and skin contact are epxected to be the primary routes of occupational exposure to Benzoflex 9-88 SG Plasticizer. This material is not expected to cause significant adverse effects when good industrial hygiene and safety practices are followed. Repeated or prolonged exposure to this material is not known to aggravate any existing medical conditions.

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: 198.89°C (390°F) (C.O.C.) CLOSED CUP: > 93.3°C (200°F)
Flammable Limits	Not available.
Fire and Explosion Hazards	Products of combustion are carbon oxides (CO, CO2).
Fire Fighting Media and Instructions	Use DRY chemicals, CO2, water spray or foam. Water or foam may cause frothing. Firefighters and others who may be exposed to products of combustion should wear full firefighting turn out gear and self-contained breathing apparatus. Firefighting equipment should be thoroughly decontaminated after use.

Section VI. Accidental Release Measures

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

Section VII. Handling and Storage

Handling	Keep away from heat, sparks and sources of ignition.
Storage	Store in well ventilated area away from sources of ignition.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Good general ventilation should be sufficient to control airborne levels. If user operations generates fumes or mists, use ventilation to minimize exposure to airborne contaminants.
Personal Protection	Safety glasses. Lab coat. Gloves.
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	Liquid. (Clear oily liquid.)
Color	Off-white. (Light.)
Odor	Ester-like (Slight.)
Boiling Point	231.67°C (449°F)
Melting Point	Not available.
Critical Temperature	Not available.
Specific Gravity	1.13 (Water = 1)
Vapor Pressure	0.000000229 mm of Hg (@ 20°C)
Vapor Density	11.8 (Air = 1)
Volatility	Volatile Organics Concentration (VOC) = 5.90+/- 0.75% (ASTM Method D2369; EPA Method 24)
Odor Threshold	Not available.

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Evaporation rate	Lower than 1. [Butyl acetate.]
Viscosity	Approximately 110 cP @ 250 C
Solubility	Easily soluble in methanol, diethyl ether and acetone. Soluble in n-octane. Very slightly soluble in water.
pH (1% soln/water)	Not available.
Molecular Weight	342

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	Slightly reactive to reactive with oxidizing agents, acids and alkalis.
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

Acute oral toxicity (LD50): 4068-9800 mg/kg (Rat), Slightly to Practically Non-toxic
Acute oral toxicity (LD50): 4068-5700 mg/kg (Mouse), Slightly to Practically Non-toxic
Acute dermal toxicity (LD50): > 2000 mg/kg (Rabbit), No More Than Slightly Toxic
Acute toxicity of the mist (LC50): > 200 mg/L (Rat), Practically Non-toxic
Practically Non-irritating to Eyes (Rabbit)(0.6/110.0)
Practically Non-irritating to Skin (Rabbit)(0.5/8.0)

No genetic changes were reported in standard tests (Ames) using Salmonella and Saccharomyces, both with and without mammalian metabolic activation. Toxicity was observed in two Salmonella strains. No effects were reported in dogs administered up to 1.2% Benzoflex 9-88 Plasticizer in their diet for 90 days. Decreased body weight gain and food consumption, depression, tremor and death were reported in rats administered 4.0% Benzoflex 9-88 Plasticizer in their diet for 90 days. No effects were reported at the 0.5% and 1.0% dose levels.

Section XII. Ecological Information

Ecotoxicology	Not available.
Chemical Fate	The BOD5 is 110 ppm.

Section XIII. Disposal Considerations

Waste Disposal	Recycle to process, if possible. Consult your local or regional authorities for proper disposal methods.

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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).
DOT (Pictograms)	
Packing Group	NONE

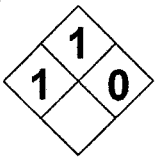
Section XV. Other Regulatory Information and Pictograms

Federal and State Regulations	Not available	
Other Classifications	**WHMIS (Canada)**	Not controlled under WHMIS (Canada).
	WHMIS (Canada) (Pictograms)	
	TDG (Canada) (Pictograms)	

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	

National Fire Protection Association (U.S.A.)



Section XVI. Other Information

References

-REGISTRY Database, Chemical Abstract Service, 12/95
-CHEMLIST Database, Chemical Abstract Service, 12/95
-Registry of Toxic Effects of Chemical Substances (RTECS), 4/95
-Chemical Hazard Response Information System (CHRIS), Micromedex Inc., Vol. 27, 1/31/96
-LOLI Database, Chem Advisor via Micromedex Inc., 2/19/96
-ICRMS European Database, Ariel Research Corporation, 2/26/96
-ICRMS Inventories Database, Ariel Research Corporation, 2/26/96
-Velsicol Chemical Corporation, unpublished study, 1/25/96
-Product Information Bulletin, Velsicol Chemical Corporation, 5/1/93

Other Special Considerations No additional remark.

Validated by Amy M. Bredbenner on 10/29/97.	**Verified by Amy M. Bredbenner.**
Supercedes 05/08/97	**Printed 6/16/98.**
Revision Revised Section 7	

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