

HB CHEMICAL CORPORATION

Page 1 of 4
Date: January, 2008
Replaces: Dec., 2005

Material Safety Data Sheet

SECTION I CHEMICAL and COMPANY IDENTIFICATION

PRODUCT: *DOP*
CHEMICAL NAME: *Di 2-ethylhexyl phthalate; Dioctyl phthalate*
COMMON/GENERIC NAME: DOP, DEHP
CHEMICAL FAMILY: Ester
MANUFACTURER: HB CHEMICAL CORP. **CUSTOMER SERVICE-** 330-920-8023
EMERGENCY NUMBERS: *CHEMTREC 800-424-9300*
CANUTEC (Canada) 613-996-6666

SECTION II COMPOSITION / INGREDIENT INFORMATION

	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
COMPOSITION: Di 2-ethylhexyl phthalate 100% C.A.S.# 117-81-7	5.0 mg/m	10.0 mg/m

SECTION III/IV HAZARDS / FIRST AID PROCEDURES

EMERGENCY OVERVIEW: DOP is regulated as a hazardous chemical in North America (other countries do not regulate it). Typical of the phthalate ester group, this clear oily liquid may cause eye and skin irritation. Inhalation should be avoided. Special attention must be paid to regulations regarding hazardous spills.

EYE: Can be irritating to mucous membrane and eyes. Flush eyes with water for 10-15 min., or until irritation subside. Persistent irritation will require medical advice.

SKIN: May be mildly irritating to skin. Remove contaminated clothing and wash skin thoroughly with soap and water. If in contact with hot product, treat as a burn.

INGESTION: Do not ingest. Can cause nausea and upset stomach. If swallowed, attempt to induce vomiting. Medical treatment should be directed at preventing absorption. Seek medical attention.

INHALATION: Remove to fresh air, give artificial respiration or oxygen if necessary. High vapor concentration may be irritating to nose, throat, lungs and eyes.

TOXICITY: See Comments on Toxicology and potential carcinogenicity on page 4.

CARCINOGENICITY: See Comments on Toxicology and potential carcinogenicity on page 4.

IN ALL CASES OF EMERGENCY, CONTACT A PHYSICIAN

SECTION V FIRE AND EXPLOSION INFORMATION

FLASH POINT: 210°C(410°F) COC

FIRE-FIGHTING PROCEDURES: Use Chemical foam, CO₂, or Dry Chemical. Water spray can be used to keep containers cool, but is generally ineffective for direct fire suppression. Direct water will spread fire. Treat as burning oil. Containers can explode through expansion. Keep drums as cool as possible to avoid expansion, explosions, and splattering.

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HB CHEMICAL CORPORATION

DOP Page 2 of 4

HAZARDOUS COMBUSTION PRODUCTS: This product will decompose under extreme temperatures forming oxides of carbon.

PROTECTIVE EQUIPMENT: Firefighters should wear self-contained breathing apparatus when exposed to smoke, fumes, or decomposition products (carbon dioxide/carbon monoxide)

SECTION VI **SPILLS AND ENVIRONMENTAL INFORMATION**

SPILL OR LEAK PRECAUTIONS: Wear appropriate protective equipment and gloves and clothing. Contain spill with inert absorbent or earth. Transfer to secure containers and dispose of according to local and state regulations. Thought should always be given to collecting the material in such a manner that it could be recycled. Clean/scrub affected area with detergent. Prevent run-off into sewers or natural waterways. Spills in excess of the RQ must be reported to the local emergency response organizations. Major spills should also be reported to the National Response Center. Spills with potential to contaminate coastal waterways must be reported to the U.S. Coast Guard (800-424-8802)

WASTE DISPOSAL: All containers should be effectively labeled to facilitate the appropriate disposal or reclaim.

SECTION VII **HANDLING AND STORAGE**

Store in sealed containers in dry, ambient temperature conditions. Perform drum and tote filling in well-ventilated area wearing protective eye shields and clothing.

SECTION VIII **EXPOSURE CONTROLS AND PERSONAL PROTECTION**

VENTILATION: Use only where sufficient ventilation exists to keep exposure levels below recommended levels. (Section II)

RESPIRATORY AND PERSONAL PROTECTION: Respirators should be selected (when TWA exceeded) and used in accordance with OSHA 29CFR1910.34. Avoid hot vapors when mixing or packaging. Safety glasses with side shields; gloves, boots and apron as appropriate.

FACILITIES: There should be a shower facility and eyewash in the building where this product is being stored and handled. Exercise good chemical handling practice.

SECTION IX **PHYSICAL AND CHEMICAL INFORMATION**

Appearance: Clear oily liquid

Specific Gravity @25°C = 0.983

Vapor Pressure: Not Determined

Viscosity cPs(25°C) = 80

Evaporation Rate: < 1 (butyl acetate=1)

Freezing Point: -45°C(-49°F)

Vapor Density: Not Determined

Solubility in Water: nil

SECTION X **STABILITY AND REACTIVITY**

Under normal storage conditions, this product a) is stable; b) will not polymerize or exotherm; c) should be kept away from extreme heat, strong oxidizers and bases; d) this product decomposes under high temperature and hydrolyses in humid conditions.

SECTION XI **TOXICOLOGICAL INFORMATION**

See special section on Toxicology/potential Carcinogenicity at end of MSDS

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HB CHEMICAL CORPORATION

DOP Page 3 of 4

SECTION XII ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: BODS and COD: BOD for this product is 0.04 g O₂/g

SECTION XIII DISPOSAL CONSIDERATIONS

Government regulation may apply to empty DOP containers if not cleaned properly. See also Sect. VI. The major consideration with esters and polyesters is the clean-up difficulty of these oily liquids. In larger spills, the potential for reclaiming the product should be considered and might dictate the type of containment and clean up employed. Incineration by a permitted hazardous waste facility in accordance with all regulatory requirements is the preferred method of disposal.

SECTION XIV TRANSPORTATION INFORMATION

DOT: Shipping Description: Environmentally hazardous liquid, N.O.S., Class 9, UN3082, PG 111, RQ (100 lbs. as dioctyl phthalate), notify NRC/911. ERG #171

INTERNATIONAL: IMO: Non-hazardous. Label: Product trade-name and its chemical description.

CANADA TRANSPORT HAZ. MAT Not Controlled

EUROPEAN TRANSPORTATION: ADR/RID HAZ. CLASS.: Not regulated.

US CUSTOMS: - HARMONIZED TARIFF CODE:2917.32.00.00

SECTION XV REGULATORY INFORMATION

OSHA: Hazardous chemical under 29 CFR 1200 (dioctyl phthalate, DEHP)

SARA TITLE III - 311/312 CATEGORIES: Immediate health hazard/ Delayed health hazard.

“ “ - 313 Toxic chemicals: DEHP reportable.

CERCLA RQ: Reportable quantity: 45.4 kg (100 lbs.)

RCRA Status: Hazardous Waste Code: U069

TSCA REGULATORY: All intentional ingredients are listed in the TSCA Inventory.

CANADA WHMIS HAZARD SYMBOL AND CLASS: D2A

CANADA INGREDIENT DISCLOSURE LIST: Does not contain any ingredients on the IDL. All intentional ingredients are on the DSL.

SECTION XVI OTHER INFORMATION

HMIS Label: Fire: 1
Health: 1
Reactivity: 0
Protection: C

Prepared: January, 2008

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.

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COMMENTS OF TOXICOLOGY AND POTENTIAL CARCINOGENICITY

The toxicity of DOP (DEHP) has been questioned since the National Cancer Institute (NCI) reported in 1980 that very high levels of DOP caused liver tumors in mice and rats of both sexes in a lifetime feeding study. As a result, the toxicology studies were reviewed and reported to the Consumer Products Safety Commission by the Chronic Hazard Advisory Panel on DOP/DEHP in 1985.

The Chemical Manufacturers Assoc. (CMA) continues to sponsor research on the safety of all phthalates in a program established with the U.S. EPA. The findings so far are briefly summarized below.

DOP and its metabolites are not genotoxic.

DOP appears to belong to a special class of non-genotoxic carcinogens that induce liver enlargement and liver peroxisomal proliferation in mice and rats. These changes may be unique to rodents and may not occur in other animals including man.

DOP metabolism studies have demonstrated significant differences between rats and primates. These studies conducted at the same extremely high doses used in NCI bioassay, caused changes in the livers of rodents, which were not seen at more realistic doses. These data may imply equally significant differences in the susceptibility of these species to the carcinogenic effects of DOP/DEHP.

In summary, the NCI bioassay of DOP at very high dietary levels resulted in a carcinogenic effect that appears unique in rodents. The relevance of this bioassay to lower dose levels and to Humans is seriously questioned.

Components listed as Carcinogens by regulatory agencies:

OSHA: None Listed

IARC: Listed

NTP: Listed

Oral LD50	Rat	30,600 mg/kg
	Mouse	33,000 mg/kg
Eye Irritation:	Rabbit	Slight
Skin Irritation	Rabbit	25 g/kg