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Certified Company



THE POWER OF THREE³

PHARMCO-AAPER
AND COMMERCIAL ALCOHOLS

Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

MATERIAL SAFETY DATA SHEETS

Manufacturer: PHARMCO-AAPER
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DIBUTYL PHTHALATE

Section 1 - Product and Company Information
Product Name DIBUTYL PHTHALATE

Section 2 - Composition/Information on Ingredient

Substance Name CAS # SARA 313

DIBUTYL PHTHALATE 84-74-2 Yes

Formula C₁₆H₂₂O₄

Synonyms o-Benzenedicarboxylic acid, dibutyl ester *

Benzene-o-dicarboxylic acid di-n-butyl ester *

n-Butylphthalate * Di-n-butylester kyseliny

ftalove (Czech) * Celluflex DPB * DBP (ester) *

Dibutyl 1,2-benzenedicarboxylate * Dibutyl

phthalate * Di-n-butyl phthalate * Dibutyl

o-phthalate * Dibutyl phthalate (ACGIH:OSHA) *

Elaol * Ergoplast FOB * Genoplast B * Hatcol DBP

* Hexaplas M/B * Kodaflex DBP * Monocizer DBP *

Palatinol C * Polycizer DBP * PX 104 * RCRA waste number U069 * Staflex DBP * Unimoll DB *

Vestinol

C * Witcizer 300

RTECS Number: TI0875000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Toxic.

May cause harm to the unborn child. Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms. Possible risk of impaired fertility.

Target organ(s): Eyes. Kidneys.

HMIS RATING

HEALTH: 2*

FLAMMABILITY: 1

REACTIVITY: 0

NFPA RATING

HEALTH: 2

FLAMMABILITY: 1

REACTIVITY: 0 *additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

Call a physician.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

340 °F 171 °C Method: closed cup

EXPLOSION LIMITS

Lower: 0.47 %

AUTOIGNITION TEMP

402 °C

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam. Foam and water spray are effective but may cause frothing.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable coveralls and discard them after use.

METHODS FOR CLEANING UP

Cover with dry lime or soda ash, pick up, keep in a closed container, and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe vapor. Do not breathe mist. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN

(EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS

Country Source Type Value

USA ACGIH TWA 5 MG/M3

USA MSHA Standard-air TWA 5 MG/M3

USA OSHA. PEL 8H TWA 5 MG/M3

New Zealand OEL

Remarks: check ACGIH TLV

USA NIOSH TWA 5 MG/M3

EXPOSURE LIMITS

Country Source Type Value

Poland NDS 5 MG/M3

Poland NDSch 10 MG/M3

Poland NDSP -

Section 9 - Physical/Chemical Properties

Appearance Physical State: Clear liquid

Color: Colorless

Property Value At Temperature or Pressure

Molecular Weight 278.35 AMU

pH N/A

BP/BP Range 340 °C 760 mmHg

MP/MP Range - 35.0 °C

Freezing Point N/A

Vapor Pressure 1 mmHg 147 °C

Vapor Density 9.6 g/l

Saturated Vapor Conc. N/A

SG/Density 1.043 g/cm³

Bulk Density N/A

Odor Threshold N/A

Volatile% N/A

VOC Content N/A

Water Content N/A

Solvent Content N/A

Evaporation Rate N/A

Viscosity N/A

Surface Tension N/A

Partition Coefficient N/A

Decomposition Temp. N/A

Flash Point 340 °F 171 °C Method: closed cup

Explosion Limits Lower: 0.47 %

Flammability N/A

Autoignition Temp 402 °C
Refractive Index 1.492
Optical Rotation N/A
Miscellaneous Data N/A
Solubility N/A
N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents, Nitrates, Bases, Acids, Chlorine.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes eye irritation.

Inhalation: May be harmful if inhaled. Vapor or mist is irritating to the mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Kidneys. Liver. Lungs. Testes. Central nervous system. Eyes.

SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause: Nausea, dizziness, and headache. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Oral: Rat, 8000 mg/kg; LD50

Inhalation: Rat, 4,250 mg/m³; LC50

Intraperitoneal: Rat, 3050 UL/KG; LD50

Intramuscular: Rat, >8 GM/KG; LD50

Oral: Mouse, 5289 mg/kg; LD50

Inhalation: Mouse 25,000 mg/m³; LC50

Intraperitoneal: Mouse 3570 MG/KG; LD50

Intravenous: Mouse, 720 MG/KG ;LD50

Skin: Rabbit, >20 ML/KG; LD50

Oral: Guinea pig, 10000 mg/kg; LD50

Remarks: Nutritional and Gross Metabolic: Weight loss or decreased weight gain. Behavioral: Somnolence (general depressed activity). Behavioral: Withdrawal.

Oral: Mammal, 5000 mg/kg; LD50

CHRONIC EXPOSURE - TERATOGEN

Result: May cause congenital malformation in the fetus.

Species: Rat

Dose: 2520 MG/KG

Route of Application: Oral

Exposure Time: (1-21D PREG)

Result: Effects on Embryo or Fetus: Extra embryonic structures (e.g., placenta, umbilical cord).

Species: Rat

Dose: 1500 MG/KG

Route of Application: Oral

Exposure Time: (15D PREG)

Result: Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat

Dose: 305 MG/KG

Route of Application: Intraperitoneal

Exposure Time: (5-15D PREG)

Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Mouse

Dose: 8640 MG/KG

Route of Application: Oral

Exposure Time: (1-18D PREG)

Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

CHRONIC EXPOSURE - MUTAGEN

Species: Human

Dose: 354 MMOL/L

Cell Type: lymphocyte

Mutation test: DNA damage

Species: Human

Dose: 354 MMOL/L

Cell Type: Other cell types

Mutation test: DNA damage

Species: Hamster

Dose: 30 MG/L

Exposure Time: 24H

Cell Type: fibroblast

Mutation test: Cytogenetic analysis

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Species: Rat

Dose: 24 GM/KG

Route of Application: Oral

Exposure Time: (20D MALE)

Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal

Effects: Testes, epididymis, sperm duct.

Species: Rat

Dose: 6750 MG/KG

Route of Application: Oral

Exposure Time: (0-8D PREG)

Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Maternal Effects: Uterus, cervix, vagina.

Species: Rat

Dose: 2250 MG/KG

Route of Application: Oral

Exposure Time: (7-9D PREG)

Result: Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Effects on Embryo or Fetus:

Fetotoxicity (except death, e.g., stunted fetus). Effects on

Fertility: Post-implantation mortality (e.g., dead and/or

resorbed implants per total number of implants).

Species: Rat

Dose: 8820 MG/KG
Route of Application: Oral
Exposure Time: (7-15D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.
Species: Rat
Dose: 19 GM/KG
Route of Application: Oral
Exposure Time: (3-22D PREG/3-20D POST)
Result: Effects on Newborn: Delayed effects. Maternal Effects: Uterus, cervix, vagina. Effects on Newborn: Physical.
Species: Rat
Dose: 6750 MG/KG
Route of Application: Oral
Exposure Time: (0-8D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Maternal Effects: Other effects.
Species: Rat
Dose: 1017 MG/KG
Route of Application: Intraperitoneal
Exposure Time: (5-15D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Species: Rat
Dose: 6 GM/KG
Route of Application: Intraperitoneal
Exposure Time: (3-9D PREG)
Result: Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4).
Species: Mouse
Dose: 7200 MG/KG
Route of Application: Oral
Exposure Time: (1-18D PREG)
Result: Specific Developmental Abnormalities: Central nervous system. Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).
Species: Mouse
Dose: 20 GM/KG
Route of Application: Oral
Exposure Time: (6-13D PREG)
Result: Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).
Species: Mouse
Dose: 16800 MG/KG
Route of Application: Oral
Exposure Time: (7D MALE)
Result: Paternal Effects: Other effects on male. Paternal Effects: Testes, epididymis, sperm duct.
Species: Guinea pig
Dose: 14 GM/KG
Route of Application: Oral
Exposure Time: (7D MALE)
Result: Paternal Effects: Testes, epididymis, sperm duct.

Section 12 - Ecological Information

N/A

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Environmentally hazardous substances, liquid, n.o.s.

UN#: 3082

Class: 9

Packing Group: Packing Group III

Hazard Label: Class 9

PIH: Not PIH

IATA

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.

IATA UN Number: 3082

Hazard Class: 9

Packing Group: III

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION

Symbol of Danger: T-N

Indication of Danger: Toxic. Dangerous for the environment.

R: 61-50-62

Risk Statements: May cause harm to the unborn child. Very toxic to aquatic organisms. Possible risk of impaired fertility.

S: 53-45-61

Safety Statements: Restricted to professional users. Attention -

Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/safety data sheets.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Toxic.

Risk Statements: May cause harm to the unborn child. Irritating to eyes, respiratory system and skin. Very toxic to aquatic organisms. Possible risk of impaired fertility.

Safety Statements: Restricted to professional users. Attention -

Avoid exposure - obtain special instructions before use. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Avoid release to the environment. Refer to special instructions/safety data sheets.

US Statements: Target organ(s): Eyes. Kidneys.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: Yes

DEMINIMIS: 1 %

NOTES: This product is subject to SARA section 313 reporting requirements.

TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or

greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are:

Chemical Name	CAS Number	RQ
Dibutyl phthalate	84-74-2	10 lb

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Dibutyl Phthalate

Section 16 - Other Information

DISCLAIMER:

The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.