Material Safety Data Sheet  
(Butyl Benzyl Phthalate)

**SECTION 1 – PRODUCT AND COMPANY INFORMATION**

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>Butyl Benzyl Phthalate</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNONYM</td>
<td>BBP, 1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester</td>
</tr>
<tr>
<td>FORMULA</td>
<td>C19H20O4</td>
</tr>
<tr>
<td>CAS NUMBER</td>
<td>85-68-7</td>
</tr>
</tbody>
</table>

**SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>CAS NUMBER</th>
<th>PURITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl Benzyl Phthalate</td>
<td>85-68-7</td>
<td>100%</td>
</tr>
</tbody>
</table>

**SECTION 3 – HAZARDS IDENTIFICATION**

Emergency Overview

**HMIS Rating**
Health: 1*
Flammability: 1
Reactivity: 0

**NFPA Rating**
Health: 1
Flammability: 1
Reactivity: 0

**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.

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**SECTION 5 – FIRE FIGHTING MEASURES**

<table>
<thead>
<tr>
<th>Material</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>235 °F 113 °C Method: closed cup</td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>232 °C</td>
</tr>
<tr>
<td>Flammability</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Extinguishing Media**

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

**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.

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**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.

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**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.

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**SECTION 8 - EXPOSURE CONTROLS/ PERSONAL PROTECTION**

**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
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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.

### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>312.37 AMU</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>0.16 mmHg</td>
<td>150 °C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>10.8 g/l</td>
<td></td>
</tr>
<tr>
<td>SG/Density</td>
<td>1.1 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>235 °F 113 °C</td>
<td>Method: closed cup</td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>232 °C</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 10 – STABILITY AND REACTIVITY DATA

**Stability**
Stable: Stable.
Materials to Avoid: Strong oxidizing agents, Strong bases.

**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: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper
respiratory tract.
Ingestion: May be harmful if swallowed.

**Target Organ(s) Or System(s)**
Liver. Pancreas.

**TOXICITY DATA**

<table>
<thead>
<tr>
<th>Route</th>
<th>Species</th>
<th>Value (mg/kg)</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>2330</td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td>Rat</td>
<td>6700</td>
<td></td>
</tr>
<tr>
<td>Oral</td>
<td>Mouse</td>
<td>4170</td>
<td></td>
</tr>
<tr>
<td>Skin</td>
<td>Mouse</td>
<td>6700</td>
<td></td>
</tr>
</tbody>
</table>
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Intraperitoneal  Mouse  3160 MG/KG  LD50
Skin  Rabbit  > 10000 mg/kg  LD50
Oral  Guinea pig  13750 mg/kg  LD50

Behavioral: Withdrawal. Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

CHRONIC EXPOSURE - CARCINOGEN
Result: This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Species: Rat
Route of Application: Oral
Dose: 433 GM/KG
Exposure Time: 2Y
Frequency: C
Result: Tumorigenic: Carcinogenic by RTECS criteria.  

Species: Rat
Route of Application: Oral
Dose: 437 GM/KG
Exposure Time: 2Y
Frequency: C
Result: Tumorigenic: Carcinogenic by RTECS criteria.  
Blood: Leukemia

Species: Rat
Route of Application: Oral
Dose: 364 GM/KG
Exposure Time: 2Y
Frequency: C
Result: Gastrointestinal: Tumors. Tumorigenic: Carcinogenic by RTECS criteria.

IARC Carcinogen List
Rating: Group 3

NTP Carcinogen List
Rating: Clear evidence.
Species: Rat
Route: Feed

IRIS/EPA Carcinogen List
Rating: Group C

Chronic Exposure - Teratogen
Result: May cause congenital malformation in the fetus.

Species: Rat
Dose: 16400 MG/KG
Route of Application: Oral
Exposure Time: (6-15D PREG)
Result: Specific Developmental Abnormalities: Musculoskeletal system. Effects on Embryo or Fetus: Other effects to embryo.
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Chronic Exposure - Mutagen  
Species: Hamster  
Dose: 2 MG/L  
Cell Type: Embryo  
Mutation test: Morphological transformation.

Chronic Exposure - Reproductive Hazard  
Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

Species: Rat  
Dose: 21 GM/KG  
Route of Application: Oral  
Exposure Time: (14D MALE)  

Species: Rat  
Dose: 16400 MG/KG  
Route of Application: Oral  
Exposure Time: (6-15D PREG)  

Species: Rat  
Dose: 4900 MG/KG  
Route of Application: Oral  
Exposure Time: (1-7D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Rat  
Dose: 154 GM/KG  
Route of Application: Oral  
Exposure Time: (10W MALE)  
Result: Paternal Effects: Testes, epididymis, sperm duct. Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).

Species: Rat  
Dose: 4500 MG/KG  
Route of Application: Oral  
Exposure Time: (0-8D PREG)  
Result: Maternal Effects: Other effects. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat  
Dose: 1500 MG/KG  
Route of Application: Oral  
Exposure Time: (6D 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).
Species: Mouse  
Dose: 9100 MG/KG  
Route of Application: Oral  
Exposure Time: (6-15D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth). Effects on Embryo or Fetus: Other effects to embryo.

Species: Mouse  
Dose: 23300 MG/KG  
Route of Application: Oral  
Exposure Time: (6-15D PREG)  
Result: Maternal Effects: Other effects.

SECTION 12 – ECOLOGICAL INFORMATION

Acute Ecotoxicity Tests
- Test Type: LC50 Fish  
  Species: Lepomis macrochirus (Bluegill)  
  Time: 96 h  
  Value: 1.7 mg/l

- Test Type: EC50 Daphnia  
  Species: Daphnia magna  
  Time: 48 h  
  Value: 1.7 mg/l

Elimination
- Method: Biotic/Aerobic  
- Elimination: 88 %  
- Classification: Substantially biodegradable.

Additional Results/Data From Relevent Scientific Experiments
- Avoid contamination of the environment

SECTION 13 – DISPOSAL CONSIDERATION

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 - TRANSPORTATION DATA

DOT
- Proper Shipping Name: Environmentally hazardous substances, liquid, n.o.s.  
- UN#: 3082  
- Class: 9  
- Packing Group: Packing Group III  
- Hazard Label: Class 9
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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: 61-62-50/53
Risk Statements: May cause harm to the unborn child. Possible risk of impaired fertility. Very
toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S: 53-45-60-61
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). This material and its container must be disposed of as hazardous
waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

US Classification and Label Text
Indication of Danger: Toxic. Dangerous for the environment.
Risk Statements: May cause harm to the unborn child. Possible risk of impaired fertility. Very
toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
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). This material and its container must be disposed of as hazardous
waste. Avoid release to the environment. Refer to special instructions/safety data sheets.

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

SECTION 16 – OTHER INFORMATION

Disclaimer
The above information is believed to be correct but does not purport to be all inclusive and shall be used
only as a guide. The information in this document is based on the present state of our knowledge and is
applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee
of the properties of the product.