



# Safety Data Sheet (Dibutyl Maleate)

DATE PREPARED: 1/17/2014  
REVISION NUMBER: 1/17/2014

## Section 1 – Company Information

### Parchem - fine & specialty chemicals

415 Huguenot Street

New Rochelle, NY 10801

(914) 654-6800 (914) 654-6899

[parchem.com](http://parchem.com) [info@parchem.com](mailto:info@parchem.com)

### EMERGENCY RESPONSE NUMBER:

CHEMTEL - Parchem CCN# M1S0007152

Toll Free US & Canada: (800)255-3924

All other Origins: (813) 248-0585

Collect Calls Accepted

## Section 2 – Product Identification/ Information on Ingredients

PRODUCT NAME Dibutyl Maleate

SYNONYM DBM

FORMULA  $C_{12}H_{20}O_4$

PRODUCT	CAS NUMBER	% BY WEIGHT
Dibutyl Maleate	105-76-0	80 - 100%

## Section 3 – Hazards Identification

### Classification

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2A

Specific target organ toxicity (single exposure): Category 3

**Signal Word:** Warning

**Hazard Statements:** Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

**Appearance:** Clear liquid

**Physical State:** Liquid

**Odor:** Characteristic

### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

### Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation persists, get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention



**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards Not Otherwise Classified (HNOC):** May be harmful if swallowed

**Other Hazards:** Toxic to aquatic life with long lasting effects. Toxic to aquatic life

Section 4 – First Aid Measures

**General Advice:** Provide this MSDS to medical personnel for treatment.

**Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Skin Contact:** In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. If irritation persists, seek medical attention.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Do NOT induce vomiting without medical advice. Call a physician or poison control center immediately.

**Symptoms:** See Section 11: Toxicological Information of this SDS for more detailed symptoms.

**Notes to Physician:** Treat symptomatically.

Section 5 – Fire Fighting Measures

**Suitable Extinguishing Media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire:** Foam, chemical powder, CO<sub>2</sub>, water spray, or fog.

**Unsuitable Extinguishing Media:** Not determined.

**Specific Hazards Arising from the Chemical:** Combustible product. Risk of fire if exposed to flame or heat. The heating can cause expansion or decomposition, leading to violent burst of the containers. Mists with combustible products can be explosive. Avoid reactions with oxidizing agents.

**Hazardous Combustion Products:** Toxic fumes of carbon monoxide or irritant smoke.

**Protective Equipment and Precautions for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Wear protective gloves. Prevent, by any means, spillage from entering drains or waterways. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. Do not approach containers suspected to be hot. Cool fire-exposed containers with water spray from a protect location. If safe to do so, remove containers from path of fire.

Section 6 – Accidental Release Measures

**Personal Precautions:** Wear protective clothing as described in Section 8 of this safety data sheet.



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**Small Spills:** Clean up spills immediately. Wear impervious gloves and safety glasses.

**Large Spills:** Clear area of personnel. Wear protective clothing, impervious gloves and safety glasses. Shut off all possible sources of ignition and increase ventilation.

**For Emergency Responders:** Follow applicable OSHA regulations (29 CFR 1910.120).

**Methods for Containment:** Prevent further leakage or spillage if safe to do so. In case of small spills, wipe up and absorb small quantities with vermiculite or other absorbent material. For large spills, absorb or cover spill with sand, earth, inert material, or vermiculite.

**Methods for Clean-Up:** Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see Section 13 of the SDS.

**Prevention of Secondary Hazards:** Spills may present a slipping hazard.

### Section 7 – Handling & Storage

**Advice on Safe Handling:** Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid breathing mist and vapor, especially at high temperature. Use in a well-ventilated area. Avoid prolonged and repeated skin contact. Avoid contact with eyes. Keep containers securely sealed when not in use. Wash hands with soap and water after handling. Use only in well-ventilated areas.

**Storage Conditions:** Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up.

**Packaging Materials:** In bulk, stainless steel or carbon steel, aluminum, or reinforced plastic tanks with vent. Check if the containers are clearly labeled.

**Incompatible Materials:** Strong oxidizing agents; Strong bases.

### Section 8 – Exposure Controls & Personal Protection

**Exposure Guidelines:** The following information is given as general guidance.

**Engineering Controls:** General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. Provide adequate ventilation in warehouse or closed storage areas. In the area where product is handled, keep an emergency shower and eyewash unit.

**Eye/Face Protection:** No special equipment when handling small quantities. Otherwise, wear safety glasses with side shields. Contact lenses pose a special hazard. Soft lenses can absorb irritants and all lenses concentrate them.

**Skin and Body Protection:** Wear chemical protective gloves, i.e. PVC gloves with polyethylene liner or latex. Safety shoes. Apron made of PVC, Trevira, or equivalent.

**Respiratory Protection:** If risk of overexposure exists, use semi-facial respirator with filter for organic vapors.

**General Hygiene Considerations:** Handle in accordance with good industrial hygiene and safety practice.



Section 9 – Physical & Chemical Properties

**Physical State:** Liquid  
**Appearance:** Clear liquid  
**Color:** Clear  
**Odor:** Characteristic  
**Odor Threshold:** Not determined  
**pH:** Not determined  
**Melting Point/Freezing Point:** Not applicable  
**Boiling Point/Boiling Range:** 280.6°C (537.08°F)  
**Flash Point:** 140.5°C (284.9°F)  
**Evaporation Rate:** Not determined  
**Flammability (Solid, Gas):** Not determined  
**Upper Flammability Limits:** Not determined  
**Lower Flammability Limit:** Not determined  
**Vapor Pressure:** Not determined  
**Vapor Density:** Not determined  
**Specific Gravity:** 0.9960 - 0.9964 at 68°F (20°C)  
**Water Solubility:** Insoluble in water  
**Solubility in Other Solvents:** Not determined  
**Partition Coefficient:** Not determined  
**Auto-Ignition Temperature:** Not determined  
**Decomposition Temperature:** Not determined  
**Kinematic Viscosity:** Not determined  
**Dynamic Viscosity:** Not determined  
**Explosive Properties:** Not an explosive  
**Oxidizing Properties:** Not determined

Section 10 – Stability & Reactivity Data

**Reactivity:** Not reactive under normal conditions.  
**Chemical Stability:** Stable under normal temperatures and pressures.  
**Possibility of Hazardous Reactions:** None under normal processing.  
**Hazardous Polymerization:** Hazardous polymerization does not occur.  
**Conditions to Avoid:** Incompatible Materials.  
**Incompatible Materials:** Strong oxidizing agents; Strong bases.  
**Hazardous Decomposition Products:** Carbon monoxide



Section 11 – Toxicological Information

**Product Information**

**Eye Contact:** Causes serious eye irritation.

**Skin Contact:** Causes skin irritation.

**Inhalation:** May cause respiratory irritation.

**Ingestion:** May be harmful if swallowed.

**Component Information**

**Chemical Name:** Dibutyl Maleate [105-76-0]

**Oral LD50:** 3700 mg/kg (Rat)

**Dermal LD50:** 10 g/kg (Rabbit)

**Inhalation LC50:** No data available

**Symptoms:** Please see below for symptoms.

**Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure**

**Skin Corrosion/Irritation:** Product can be slightly uncomfortable to the skin. Sensitization can result as a response of allergic dermatitis including eruptions, itching, urticarial, or ends swelling. Material can produce skin irritation after prolonged or repeated exposure and can produce contact dermatitis (non-allergic). This form of dermatitis is often characterized by redness and skin swelling, and then can evolve to vesicles formation, scale and epidermis swelling. Histologically, it can produce intercellular edema of the spongy layer and intracellular edema of epidermis.

**Serious Eye Damage/Eye Irritation:** Material can be slightly uncomfortable to eyes and is capable of causing slight, temporary conjunctiva redness (similar to windburn), temporary damage to vision and/or other transient ulcerations/damages. It can be irritating to eyes, prolonged contact can cause inflammation. Repeated or prolonged exposure to irritants can produce conjunctivitis.

**Irritation - Inhalation:** Normally, it does not pose a risk due to the non-volatile nature of the product. Vapors inhalation is more probable at elevated temperatures than at normal ones. The vapor is slightly uncomfortable to the upper respiratory tract and to the lungs. The main effects of aliphatic esters are narcosis, irritation and anesthesia at more elevated concentrations. These effects are aggravated as the molecular weights and boiling points increase. Central nervous system depression, headaches, sleepiness, dizziness, coma and neurobehavioral changes can also be symptoms of overexposure. The involvement of the respiratory tract can produce irritation of mucous membranes, dyspnea and tachypnea, pharyngitis, bronchitis, pneumonitis and under massive exposure, pulmonary edema. Gastrointestinal effects include nausea, vomit, diarrhea and abdominal cramps. Damage to liver and kidneys can result from massive exposure.

**Irritation - Ingestion:** Material can be uncomfortable to gastrointestinal tract and can be harmful if swallowed in large amounts. Considered as an improbable entry route in commercial/industrial environments.

**Carcinogenicity:** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC, or NTP.

**STOT - Single Exposure:** May cause respiratory irritation.



**Chronic Toxicity:** There are no available data about human exposure. For this reason, the health effects are based on experience with chemically similar materials.

**Target Organ Effects:** Skin, eyes, respiratory tract, central nervous system (CNS).

#### Section 12 – Ecological Information

**Ecotoxicity:** Toxic to aquatic organisms. Toxic to aquatic life with long lasting effects.

#### Component Information

**Chemical Name:** Dibutyl maleate 105-76-0

**Algae/Aquatic Plants:** 6.2: 72 h *Scenedesmus subspicatus* mg/L EC50

**Fish:** 6.2: 48 h *Leuciscus idus* mg/L LC50 static

**Toxicity to Microorganisms:** No data available

**Crustacea:** 21: 48 h *Daphnia magna* mg/L EC50

**Persistence/Degradability:** Not determined

**Bioaccumulation:** Not determined

#### Mobility

**Chemical Name:** Dibutyl Maleate 105-76-0

**Partition Coefficient:** 3.38

**Other Adverse Effects:** Not determined

#### Section 13 – Disposal Consideration

Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

#### Section 14 – Transportation Data

**DOT:** Not regulated

**IATA:** Not regulated

**IMDG:** Not regulated

**Note:** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.



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Section 15 – Regulatory Information

**International Inventories:** Not determined

**US Federal Regulations**

**SARA 313:** Not determined

**US State Regulations**

**U.S. State Right-to-Know Regulations:** Not determined

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.

