

**MATERIAL SAFETY DATA SHEET****BENZOPHENONE**

PRODUCT CODE NUMBER(S): 2170-5

**PRODUCT IDENTIFICATION**

**Chemical Name and Synonyms:** *Benzophenone; Benzoylbenzene; Diphenyl ketone*  
**Chemical Family:** *Aromatic ketone*  
**Chemical Formula:**  $C_6H_5COC_6H_5$   
**Product Use:** *Laboratory reagent*  
**Manufacturer's Name and Address:**  
*Caledon Laboratories Ltd.  
40 Armstrong Avenue  
Georgetown, Ontario L7G 4R9*  
**Telephone No:** (905) 877-0101  
**Fax No:** (905) 877-6666  
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**HAZARDOUS INGREDIENTS OF MATERIALS**

<i>Ingredients</i>	<i>%</i>	<i>TLV Units</i>	<i>CAS No.</i>
<i>Benzophenone</i>	<i>&gt;99</i>	<i>Not established</i>	<i>119-61-9</i>

**PHYSICAL DATA**

**Physical State:** *Solid*  
**Odour and Appearance:** *White crystals or flakes; floral odour*  
**Odour Threshold (ppm):** *Not available*  
**Vapour Pressure (mm Hg):** *1 mm Hg at 108°C*  
**Vapour Density (Air = 1):** *6.3*  
**Evaporation Rate:** *Not applicable*  
**Boiling Point (degrees C):** *305°C*  
**Melting Point (degrees C):** *48.0°C to 49.5°C*  
**pH:** *Not available*  
**Specific Gravity:** *1.110*  
**Coefficient of Water/Oil distribution:** *Not available*

**SHIPPING DESCRIPTION**

**UN:** *Not regulated*  
**T.D.G. Class:** *Not regulated*  
**Pkg. Group:** *Not regulated*

**REACTIVITY DATA**

**Chemical Stability:** *Stable*  
**Incompatibility with other substances:** *May react violently or explosively with strong oxidizers or reducing agents.*  
**Reactivity:** *Avoid excessive heat, ignition sources, incompatible materials. Avoid generation of dust. Protect from exposure to air and sunlight.*  
**Hazardous Decomposition Products:**  $CO, CO_2$

**FIRE AND EXPLOSION DATA**

**Flammability:** *Combustible if strongly heated. As with most organic materials, mixtures of dust with air may ignite or explode under certain conditions.*  
**Extinguishing Media:** *Dry chemical powder, alcohol or polymer foam,  $CO_2$ , water spray or fog. Use water to cool fire-exposed containers, disperse vapours, and flush spills away from area of fire. Fight fire from upwind, from a safe distance. Firefighters should wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes.*  
**Flash Point (Method Used):** *143°C (CC)*  
**Autoignition Temperature:** *Not available*  
**Upper Flammable Limit (% by volume):** *Not applicable*  
**Lower Flammable Limit (% by volume):** *Not applicable*  
**Hazardous Combustion Products:**  $CO_x$ , *irritating, toxic smoke*  
**Sensitivity to Impact:** *None identified*  
**Sensitivity to Static discharge:** *As with most organic powders, mixtures of dust with air may be sensitive under certain conditions, when ignited by an electrostatic or other high-voltage spark, or other ignition source.*

**TOXICOLOGICAL PROPERTIES AND HEALTH DATA**

*To the best of our knowledge the physical, chemical, and toxicological properties of this substance have not yet been thoroughly investigated.*

**Toxicological Data:**

**LD<sub>50</sub>:** *(oral, rat) >10 g/kg; (oral, mouse) 2,895 mg/kg; (dermal, rabbit) 3,535 mg/kg*  
**LC<sub>50</sub>:** *Not available*

**Effects of Acute Exposure to Product:**

**Inhaled:** *May be harmful. Irritating to mucous membranes and upper respiratory tract, causing coughing, shortness of breath. Vapours produced during heating are irritating and may be harmful.*

**In contact with skin:** *May cause irritation, with itching, reddening. May be harmful if absorbed; no information available regarding absorption.*

**In contact with eyes:** *Dust or mist may cause irritation, with temporary tearing, itching, reddening.*

**Ingested:** *May be harmful. May cause gastrointestinal irritation, nausea and vomiting, abdominal pain.*

**Effects of Chronic Exposure to Product:**

*Animal feeding studies have resulted in liver and bone marrow damage. No relevant human information available.*

**Carcinogenicity:** *No human or animal information available*

**Teratogenicity:** *No human or animal information available*

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**Reproductive Effects:** No human or animal information available

**Mutagenicity:** No information available

**Synergistic Products:** None known

#### PREVENTIVE MEASURES

**Engineering Controls:** Local exhaust ventilation recommended

**Respiratory Protection:** Dust mask. Dust mask or respirator or dusty conditions. For high or unknown concentrations, as in fire or spill conditions, NIOSH/MSHA approved positive-pressure, full face-piece self-contained breathing apparatus.

**Eye Protection:** Chemical safety goggles

**Skin Protection:** Plastic or rubber gloves. Other protective clothing, sleeves, coat, etc. sufficient to prevent contact.

**Other Personal Protective Equipment:** Safety shower and eye-wash fountain in work area.

**Leak and Spill Procedure:** Eliminate all sources of ignition. Evacuate and ventilate area. Cleanup personnel must be thoroughly trained in the hazards of this material and must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes. Mix with sand or inert absorbent, collect in a manner that does not raise dust, and transfer carefully into labelled, covered container(s) for removal by disposal company. Wash site of spillage thoroughly with water and detergent.

**Waste Disposal:** Follow all federal, provincial and local regulations for disposal.

**Handling Procedures and Equipment:** IRRITANT. Workers using this chemical must be trained in its hazards and its safe use, and must wear appropriate protective clothing and equipment. Follow routine safe handling procedures and good housekeeping procedures. Avoid generating dust. Avoid contact with skin and eyes. Use the smallest amount possible for the purpose, in designated areas with adequate ventilation. Keep containers closed when not in use and when empty. Wash thoroughly after handling.

**Storage Requirements:** Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible material. Keep containers tightly closed when not in use and when empty. Protect from damage.

#### FIRST AID MEASURES

##### Specific Measures:

**Eyes:** Flush eyes thoroughly with running water for five to ten (5-10) minutes, or until no trace of chemical remains, holding eyelids open while flushing. Get medical attention if irritation persists.

**Skin:** Remove contaminated clothing. Wear protective gloves to minimize contact during first aid procedures. Brush or wipe off dry material. Flush skin thoroughly with running water until no trace of chemical remains. Get medical attention if irritation develops.

**Inhalation:** Remove to fresh air. Give oxygen and get medical attention for any breathing difficulty.

**Ingestion:** If victim is alert and not convulsing, rinse mouth thoroughly with water and give 2 to 4 glasses of water to drink to dilute. Do not induce vomiting. Get medical attention. If spontaneous vomiting occurs, rinse mouth and give more water to drink.

#### REFERENCES USED

CCINFO disc: MSDS's, January 2007

Sax, Lewis: Hawley's Condensed Chemical Dictionary, 11th ed., 1987

Sax: Dangerous Properties of Industrial Materials, 5th ed., 1979

Suppliers' Material Safety Data Sheets

#### ADDITIONAL INFORMATION

**Date Issued:** July 15 1991

**Revision:** January 2010

**MSDS:** 2170-5

**Proposed Whmis Designation:** D2B

Prepared by: Caledon Laboratories Ltd. (905) 877-0101  
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