# Material Safety Data Sheet
## Benzophenone

**ACC# 02740**

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Benzophenone  
**Catalog Numbers:** AC105560000, AC105560010, AC105565000, AC219680000, AC219680500, AC219685000, B270-500, S79917  
**Synonyms:** Diphenylmethanone; Diphenyl ketone  
**Company Identification:**  
Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410  
**For information, call:** 201-796-7100  
**Emergency Number:** 201-796-7100  
**For CHEMTREC assistance, call:** 800-424-9300  
**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>119-61-9</td>
<td>Benzophenone</td>
<td>100.0</td>
<td>204-337-6</td>
</tr>
</tbody>
</table>

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white solid.  
**Caution!** May cause eye and skin irritation. May cause respiratory and digestive tract irritation. The toxicological properties of this material have not been fully investigated.  
**Target Organs:** None.

**Potential Health Effects**  
**Eye:** Causes eye irritation.  
**Skin:** Causes skin irritation. Animal feeding studies have resulted in liver and bone marrow damage.
**Ingestion:** Ingestion of large amounts may cause gastrointestinal irritation. The toxicological properties of this substance have not been fully investigated.

**Inhalation:** Causes respiratory tract irritation.

**Chronic:** Animal feeding studies have resulted in liver and bone marrow damage.

---

### Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

---

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

**Flash Point:** 143 deg C (289.40 deg F)

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

---

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions.
Section 7 - Handling and Storage

Handling: Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.
Storage: Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzophenone</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Benzophenone: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: white
Odor: rose-like - geranium odor
pH: Not available.
Vapor Pressure: Negligible.
Vapor Density: Not available.
Evaporation Rate: Negligible.
Viscosity: Not available.
Boiling Point: 305 deg C
Freezing/Melting Point: 49 deg C
Decomposition Temperature: Not available.
**Solubility:** insoluble in water.
**Specific Gravity/Density:** 1.11 (water=1)
**Molecular Formula:** C13H10O
**Molecular Weight:** 182.0694

---

**Section 10 - Stability and Reactivity**

**Chemical Stability:** Stable.
**Conditions to Avoid:** Incompatible materials, dust generation.
**Incompatibilities with Other Materials:** Strong oxidizing agents and strong reducing agents.
**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, acrid smoke and fumes.
**Hazardous Polymerization:** Has not been reported.

---

**Section 11 - Toxicological Information**

**RTECS#:**
**CAS# 119-61-9: DI9950000**

**LD50/LC50:**
**CAS# 119-61-9:**
- Oral, mouse: LD50 = 2895 mg/kg;
- Oral, rat: LD50 = >10 gm/kg;
- Skin, rabbit: LD50 = 3535 mg/kg;

**Carcinogenicity:**
CAS# 119-61-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.
**Teratogenicity:** No data available.
**Reproductive Effects:** No data available.
**Mutagenicity:** No data available.
**Neurotoxicity:** No data available.
**Other Studies:**

---

**Section 12 - Ecological Information**

**Ecotoxicity:** Fish: Fathead Minnow: LC50 = 15.3 mg/L; 96 Hr.; Unspecified
Bacteria: Phytobacterium phosphoreum: EC50 = 8.92 mg/L; 30 minutes; Microtox test No data
available.

**Environmental:** Kocs of 430 and 517 indicate that benzophenone will have low to medium soil mobility category. Leaching in soil should be important; benzophenone has been detected in groundwater samples. One aerobic screening study using sewage inoculum %BODT in 5 days suggests that benzophenone may biodegrade in soil. Biodegradation was observed (no rates given) in soil column studies; Photolysis on soil surfaces will not be important (half-life of greater than 100 days in water.

**Physical:** ATMOSPHERIC FATE: Based on an extrapolated vapor pressure of 0.0033 mm Hg at 25 deg C for the super cooled liquid, a vapor pressure of 0.0019 mm Hg at 25 deg C can be estimated for benzophenone after converting to the solid phase. Based on this vapor pressure value, benzophenone should exist almost entirely in the vapor phase in the ambient atmosphere. Vapor phase benzophenone is degraded in the ambient atmosphere by reaction with photochemically formed hydroxyl radicals; the half-life for this reaction in air can be estimated to be about 5.4 days.

**Other:** No information available.

### Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

### Section 14 - Transport Information

<table>
<thead>
<tr>
<th></th>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shipping Name:</strong></td>
<td>Not regulated as a hazardous material</td>
<td>No information available.</td>
</tr>
<tr>
<td><strong>Hazard Class:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UN Number:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Packing Group:</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section 15 - Regulatory Information

**US FEDERAL**

**TSCA**

CAS# 119-61-9 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs
None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 119-61-9: delayed.

Section 313
No chemicals are reportable under Section 313.

Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS# 119-61-9 can be found on the following state right to know lists: Minnesota.

California Prop 65
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
Not available.
Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)
CAS# 119-61-9: 1

Canada - DSL/NDSL
CAS# 119-61-9 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of D2B.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List
**MSDS Creation Date:** 6/14/1999  
**Revision #4 Date:** 2/11/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.