

# Material Safety Data Sheet

## Benzil, 99+%

ACC# 90528

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Benzil, 99+%

**Catalog Numbers:** AC105410000, AC105410050, AC105411000, AC105415000, NC9720916, NC9796151

**Synonyms:** Diphenylethanedione; Dibenzoyl

**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

CAS#	Chemical Name	Percent	EINECS/ELINCS
134-81-6	Benzil	99.0	205-157-0

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: yellow crystals.

**Caution!** Causes eye and skin irritation. May cause respiratory and digestive tract irritation.

**Target Organs:** Eyes, skin.

#### Potential Health Effects

**Eye:** Causes eye irritation. May cause chemical conjunctivitis.

**Skin:** Causes skin irritation.

**Ingestion:** May cause irritation of the digestive tract. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

**Inhalation:** May cause respiratory tract irritation. Can produce delayed pulmonary edema.

**Chronic:** Effects may be delayed.

### 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 immediately.

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

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use agent most appropriate to extinguish fire.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse.

**Storage:** Keep container closed when not in use. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Benzil	none listed	none listed	none listed

**OSHA Vacated PELs:** Benzil: 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 protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

## Section 9 - Physical and Chemical Properties

**Physical State:** Crystals

**Appearance:** yellow

**Odor:** None reported.  
**pH:** Not available.  
**Vapor Pressure:** 1.3 hPa @ 128 C  
**Vapor Density:** Not available.  
**Evaporation Rate:** Not available.  
**Viscosity:** Not available.  
**Boiling Point:** 346.0 - 348.0 deg C @ 760.00m  
**Freezing/Melting Point:** 94.00 - 95.00 deg C  
**Decomposition Temperature:** > 346 deg C  
**Solubility:** Insoluble.  
**Specific Gravity/Density:** 1.23@15 deg/4 deg  
**Molecular Formula:** C<sub>14</sub>H<sub>10</sub>O<sub>2</sub>  
**Molecular Weight:** 210.23

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.  
**Conditions to Avoid:** Incompatible materials, excess heat.  
**Incompatibilities with Other Materials:** Strong oxidizing agents.  
**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.  
**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**  
**CAS#** 134-81-6: DD1925000  
**LD50/LC50:**  
CAS# 134-81-6:  
Draize test, rabbit, eye: 100 mg/24H Moderate;  
Oral, mouse: LD50 = >3 gm/kg;

**Carcinogenicity:**  
CAS# 134-81-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

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

## Section 12 - Ecological Information

**Ecotoxicity:** Bacteria: *Phytobacterium phosphoreum*: EC50 = 0.53-0.63 mg/L; 5,15,30 minutes; Microtox test; 15 degrees C No data available.  
**Environmental:** No information found.  
**Physical:** No information found.  
**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

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not regulated as a hazardous material	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 134-81-6 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.

#### 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# 134-81-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

### 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:

XI

#### Risk Phrases:

R 36/38 Irritating to eyes and skin.

#### Safety Phrases:

**WGK (Water Danger/Protection)**

CAS# 134-81-6: No information available.

**Canada - DSL/NDSL**

CAS# 134-81-6 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**

CAS# 134-81-6 is listed on the Canadian Ingredient Disclosure List.

**Section 16 - Additional Information**

**MSDS Creation Date:** 6/22/1999

**Revision #4 Date:** 3/15/2007

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