1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Benzamide
Cat No.: AC159330000; AC159330025; AC159330050; AC159330250; AC159331000; AC159335000
Synonyms: Benzoylamide; Phenylcarboxyamide; Benzoic Acid Amide
Recommended Use: Laboratory chemicals

Company: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name: Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number:
For information in the US, call: 001-800-ACROS-01
For information in Europe, call: +32 14 57 52 11
Emergency Number, Europe: +32 14 57 52 99
Emergency Number, US: 001-201-796-7100
CHEMTREC Phone Number, US: 001-800-424-9300
CHEMTREC Phone Number, Europe: 001-703-527-3887

2. HAZARDS IDENTIFICATION

WARNING!
Harmful if swallowed. May cause skin, eye, and respiratory tract irritation. Possible risks of irreversible effects.

Appearance: White  Physical State: Solid  odor: No information available

Target Organs: None known.
Potential Health Effects: None known.
Acute Effects

**Principle Routes of Exposure**

- **Eyes**: May cause irritation.
- **Skin**: May be harmful in contact with skin. May cause irritation.
- **Inhalation**: May be harmful if inhaled. May cause irritation of respiratory tract.
- **Ingestion**: Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Effects**

Possible risks of irreversible effects.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions**

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Haz/Non-haz</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzamide</td>
<td>55-21-0</td>
<td>&gt;95</td>
<td></td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

**Inhalation**

Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

**Ingestion**

Do not induce vomiting. Call a physician or Poison Control Center immediately.

**Notes to Physician**

Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

- **Flash Point**: 180°C / 356°F
- **Method**: No information available.
- **Autoignition Temperature**: >500°C
- **Explosion Limits**
  - **Upper**: No data available
  - **Lower**: No data available

**Suitable Extinguishing Media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable Extinguishing Media**

No information available.

**Hazardous Combustion Products**

No information available.

**Sensitivity to mechanical impact**

No information available.
Sensitivity to static discharge
No information available.

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition

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. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA Health Flammability Instability Physical hazards
2 1 0 N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. HANDLING AND STORAGE

Handling
Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid dust formation. Do not breathe dust.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection
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 and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
</tbody>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Density</td>
<td>No information available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>228°C / 442.4°F</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>125 - 129°C / 257 - 264.2°F</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 290°C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>180°C / 356°F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available.</td>
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<tr>
<td>Specific Gravity</td>
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</tr>
<tr>
<td>Solubility</td>
<td>No information available.</td>
</tr>
<tr>
<td>log Pow</td>
<td>No data available</td>
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<tr>
<td>Molecular Weight</td>
<td>121.14</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>C7 H7 N O</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid


Incompatible Materials

Strong oxidizing agents, Strong bases

Hazardous Decomposition Products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

No acute toxicity information is available for this product

Component Information

Irritation

No information available.

Toxicologically Synergistic Products

No information available.

Chronic Toxicity

Carcinogenicity

There are no known carcinogenic chemicals in this product

Sensitization

No information available.

Mutagenic Effects

No information available.

Reproductive Effects

No information available.
Developmental Effects  No information available.

Teratogenicity  No information available.

Other Adverse Effects  The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Endocrine Disruptor Information  No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzamide</td>
<td>Not listed</td>
<td>590-740 mg/L LC50 96 h</td>
<td>EC50 = 59.3 mg/L 30 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EC50 = 60.7 mg/L 15 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EC50 = 63.6 mg/L 5 min</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Persistence and Degradability  Biodegradation. >75% (closed bottle test).

Bioaccumulation/ Accumulation  No information available

Mobility  .

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzamide</td>
<td>0.64</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods  Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT  Not regulated

TDG  Not regulated

IATA  Not regulated

IMDG/IMO  Not regulated
### 15. REGULATORY INFORMATION

#### International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>CHINA</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzamide</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>200-227-7</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

#### U.S. Federal Regulations

- **TSCA 12(b)** Not applicable

- **SARA 313**

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzamide</td>
<td>55-21-0</td>
<td>&gt;95</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazardous Categorization**
- Acute Health Hazard: Yes
- Chronic Health Hazard: No
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

**Clean Water Act**
Not applicable

**Clean Air Act**
Not applicable

**OSHA**
Not applicable

**CERCLA**
Not Applicable

**California Proposition 65**
This product does not contain any Proposition 65 chemicals.
State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzamide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation
Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade
No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
D1B  Toxic materials

16. OTHER INFORMATION

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Tel: (412) 490-8929

Creation Date
07-Sep-2010

Print Date
14-Sep-2011

Revision Summary
"***", and red text indicates revision

Disclaimer
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