Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Optical Brightener OB-1
Product Code: Benzoxazole, 2,2’-(1. 2-Ethenediyl)-4. 1-Phenylene) Bis
Synonyms: Fluorescent Brightener 393 (FB 393 ),C.I.393 ,Fluorescent Brightener OB-1
Formula: C28H18N2O2
CAS Number: 1533-45-5
Contact: Dongguan Baoxu Chemical Technology.,ltd.
Cajjin Business Bldg DongGuan CN 523071
Tel +86 0769 22821082
Download website www.additivesforpolymer.com

2. HAZARDS IDENTIFICATION

Appearance: Yellow, Powder.
Emergency Overview: May be harmful if swallowed.
Irritant. Physical State: Solid.
Odor: Not available

OSHA Regulatory Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Mexico - Grade: Not available
Potential Health Effects: Not available

Principle Routes of Exposure: Not available

Acute Effects:
- Eyes: Irritating to eyes. Avoid contact with eyes.
- Skin: May be harmful in contact with skin. Irritating to skin. Avoid contact with skin.
Inhalation
May be harmful by inhalation. Irritating to mucous membranes. Irritating to respiratory system.

Ingestion
May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Chronic Effects
Avoid repeated exposure.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Not available

Interactions with Other Chemicals Not available

Potential Environmental Effects There is no known ecological information for this product.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Brightener Ob-1</td>
<td>1533-45-5</td>
<td>60 - 100</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**General Advice**
- **Eye Contact**: Show this safety data sheet to the doctor in attendance. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.
- **Skin Contact**: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Consult a physician.
- **Inhalation**: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Consult a physician.
- **Ingestion**: Rinse mouth. Never give anything by mouth to an unconscious person. Consult a physician.

**Notes to Physician**
- Treat symptomatically.

**Protection of First-aiders**
- Use personal protective equipment. Avoid contact with skin, eyes and clothing.

### 5. FIRE-FIGHTING MEASURES

**Flammable Properties**
- Not available
Suitable Extinguishing Media Unsuitable
Water spray. Carbon dioxide (CO2). Dry powder. Foam. Not available
Extinguishing Media Hazardous
Thermal decomposition or combustion may produce hazardous gases
and/or materials.
Combustion Products

Explosion Data
Sensitivity to mechanical impact Not available
Sensitivity to static discharge Not 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

NFPA
Health 1 Flammability 0 Instability 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Evacuate personnel to safe areas. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental Precautions
Local authorities should be advised if significant spillages cannot be contained.

Methods for Containment
Not available

Methods for Cleaning up
Evacuate personnel to safe areas. Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

Other Information
Not applicable

7. HANDLING AND STORAGE

Handling
Use only in an area equipped with a safety shower. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation. Do not breathe vapors/dust. Avoid contact with skin, eyes and clothing. Avoid repeated exposure.

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Engineering Controls
Ensure adequate ventilation, especially in confined areas
Personal Protective Equipment

Eye/face Protection Tightly fitting safety goggles.
Skin Protection Protective gloves.
Respiratory Protection In case of insufficient ventilation wear suitable respiratory equipment.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow, Powder</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>357 - 359°C</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>Lower Not available Upper Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.39g/cm³ at 25°C</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Reactivity in Water</td>
<td>Not available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>414.47</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Heat, flames and sparks.
Incompatible Materials Strong oxidizing agents.
Hazardous Decomposition Products Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NOₓ).
Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
To the best of our knowledge, the complete toxicological properties have not been thoroughly investigated.

Chronic Toxicity

Carcinogenicity There are no known carcinogenic chemicals in this product.
Irritation Not available
Corrosivity Not available
Sensitization Not available
Neurological Effects Not available
Mutagenic Effects Not available
Reproductive Effects Not available
Developmental Effects Not available
Target Organ Effects Not available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Persistence / Degradability Not available
Bioaccumulation / Accumulation Not available
Mobility in Soil Not available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Contact waste disposal services. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of in accordance with local regulations. Empty containers should be taken for local recycling, recovery or waste disposal.

US EPA Waste Number Not available

14. TRANSPORT INFORMATION

DOT Not regulated
TDG Not regulated
MEX Not regulated
ICAO Not regulated
IATA Not regulated
IMDG/IMO Not regulated
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Country</th>
<th>Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.A. (TSCA)</td>
<td>Complies</td>
</tr>
<tr>
<td>Canada (DSL)</td>
<td>Complies</td>
</tr>
<tr>
<td>EU (ELINCS)</td>
<td>Does not Comply</td>
</tr>
<tr>
<td>EU (EINECS)</td>
<td>Complies</td>
</tr>
<tr>
<td>Japan (ENCS)</td>
<td>Complies</td>
</tr>
<tr>
<td>China</td>
<td>Complies</td>
</tr>
<tr>
<td>Korea (KECL)</td>
<td>Complies</td>
</tr>
<tr>
<td>Philippines (PICCS)</td>
<td>Complies</td>
</tr>
<tr>
<td>Australia (AICS)</td>
<td>Complies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>U.S.A. (TSCA)</th>
<th>Canada (DSL)</th>
<th>EU (EINECS)</th>
<th>EU (ELINCS)</th>
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<tr>
<td>Optical Brightener OB-1</td>
<td>Present</td>
<td>Present</td>
<td>216-245-3</td>
<td>-</td>
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</tbody>
</table>

USA

Federal Regulations SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any HAPs.

State Regulations California

Proposition 65

This product does not contain any Proposition 65 chemicals.
State Right-to-Know 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
Not determined

16. OTHER INFORMATION

Prepared By: Environmental Health and Safety, Regulatory Affairs
Preparation Date: 03-Aug-2007
Revision Date: 07-Aug-2007
Revision Summary: Not available

Disclaimer
The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS