SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Name: BENZOPHENONE 4

Other means of identification

Product Code: 3017200
CAS Number: 4065-45-6
Formula: C14H12O6S
Synonyms: Benzenesulfonic Acid, 5-Benzoyl-4-Hydroxy-2-Methoxy-; Sulisobenzone; 2-Hydroxy-4-Methoxybenzophenone-5-Sulfonic Acid

Recommended use of the chemical and restrictions on use

Recommended Use: Food, Beverage & Cosmetics
Uses advised against: Medical use. Repeated contact with food.

Details of the supplier of the safety data sheet

Supplier Address: ACETO CORPORATION
4 Tri Harbor Court
Port Washington, NY 11050-4661
Phone: (516) 627-6000
Fax: (516) 627-6093
Email: aceto@aceto.com

Emergency Telephone Number(s)
ChemTrec: 1-800-424-9300
Outside of the United States: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Classification

<table>
<thead>
<tr>
<th></th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute Toxicity - Dermal</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation</td>
<td>Category 4</td>
</tr>
</tbody>
</table>

Label elements

Emergency Overview
Signal Word

Warning

Hazard statements
Harmful if swallowed
Harmful in contact with skin
Harmful if inhaled

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance
Off-white to Light yellow Powder

Physical State
Solid

Odor
Not available

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response
Specific treatment (see supplemental first aid instructions on this label)
IF ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor/physician if you feel unwell
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None known

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms
Benzenesulfonic Acid, 5-Benzoyl-4-Hydroxy-2-Methoxy-; Sulisobenzone;
2-Hydroxy-4-Methoxybenzophenone-5-Sulfonic Acid

Formula
C14H12O6S

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>North American Hazard Indicator</th>
</tr>
</thead>
</table>

Page 2 / 9
4. FIRST AID MEASURES

First Aid Measures

General Advice
Show this safety data sheet to the doctor in attendance.

Eye Contact
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.

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

Most important symptoms and effects, both acute and delayed

Main Symptoms
No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray. Carbon dioxide (CO2). Dry powder. Foam.

Unsuitable Extinguishing Media
No information available.

Hazardous Combustion Products
Thermal decomposition or combustion may produce hazardous gases and/or materials.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
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 spills cannot be contained. Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

Methods and material for containment and cleaning up

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.

7. HANDLING AND STORAGE

Precautions for Safe Handling

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 vapours/dust. Avoid contact with skin, eyes and clothing. Avoid repeated exposure.

Conditions for safe storage, including any incompatibilities

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. Hygroscopic. Protect from moisture. Protect from water.

Incompatible Materials
Strong oxidizing agents.

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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzophenone 4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4065-45-6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face Protection
Tightly fitting safety goggles.

Skin and body protection
Wear protective gloves and protective clothing.

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

Information on basic physical and chemical properties

Appearance
Off-white to Light yellow Powder

Physical State
Solid
10. STABILITY AND REACTIVITY

Reactivity
Chemical Stability
Not applicable.
Stable under recommended storage conditions

Conditions to Avoid

Incompatible Materials
Strong oxidizing agents.

Hazardous Decomposition Products
Carbon monoxide Carbon dioxide (CO2)

Possibility of Hazardous Reactions
None under normal processing

11. TOXICOLOGICAL INFORMATION

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral (mg/kg)</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzophenone 4 (4065-45-6)</td>
<td>= 3530 (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on likely routes of exposure
Eyes
Irritating to eyes. Avoid contact with eyes.

Skin
May be harmful by skin contact. Irritating to skin. Avoid contact with skin.

Inhalation
May be harmful by inhalation. Irritating to mucous membranes. Irritating to respiratory system. Avoid breathing dust.

Ingestion
May be harmful if swallowed. Do not ingest.

Information on toxicological effects

Symptoms
No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
Eye, rabbit: 100 mg MOD

Eye damage/irritation
No information available.

Skin Corrosion/Irritation
No information available.

Sensitization
No information available.

Reproductive Effects
No information available.

Mutagenic Effects
No information available.

Developmental Effects
No information available.

STOT - single exposure
No information available.

STOT - Repeated Exposure
No information available.

Chronic Toxicity
Avoid repeated exposure.

Target Organ Effects
Eyes, Skin, Respiratory system.

Aspiration Hazard
No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document:

<table>
<thead>
<tr>
<th>ATEmix</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATEmix (oral)</td>
<td>500 mg/kg</td>
</tr>
<tr>
<td>ATEmix (dermal)</td>
<td>1100 mg/kg</td>
</tr>
<tr>
<td>ATEmix (inhalation-dust/mist)</td>
<td>1.5 mg/L</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Ecotoxicity

There is no known ecological information for this product.
100 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence / Degradability
Bioaccumulation / Accumulation
Mobility in Soil

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
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.

14. TRANSPORT INFORMATION

DOT
Not regulated

TDG
Not regulated

MEX
Not regulated

ICAO
Not regulated

IATA
Not regulated

IMDG/IMO
Not regulated

RID
Not regulated

ADR
Not regulated

ADN
Not regulated

15. REGULATORY INFORMATION

International Inventories

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

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know
This product does not contain any State Right-to-Know chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable
Canada

WHMIS Statement
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.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Preparation Date 14-Aug-2013
Revision Date 14-Aug-2013
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