Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Common Name/Trade Name</th>
<th>Indomethacin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>SPECTRUM LABORATORY PRODUCTS INC.</td>
</tr>
<tr>
<td>Address</td>
<td>14422 S. SAN PEDRO STREET</td>
</tr>
<tr>
<td>City</td>
<td>GARDENA, CA 90248</td>
</tr>
<tr>
<td>Catalog Number(s)</td>
<td>IN126</td>
</tr>
<tr>
<td>CAS#</td>
<td>53-86-1</td>
</tr>
<tr>
<td>RTECS</td>
<td>NL3500000</td>
</tr>
<tr>
<td>TSCA</td>
<td>TSCA 8(b) inventory: Indomethacin</td>
</tr>
<tr>
<td>Synonym</td>
<td>1-(4-Chlorobenzoyl)-5-methoxy-2-methyl-1H-indole-3-acetic acid; 1-(p-Chlorobenzoyl)-2-methyl-5-methoxy-3-indole-acetic acid; 1-(p-Chlorobenzoyl)-5-methoxy-2-methyli ndole-3-acetic acid; alpha-(1-(p-Chlorobenzoyl)-2-methyl-5-methoxy-3-indoly)acetic acid; N-p-Chlorobenzoyl-5-methoxy-2-methylindole-3-acetic acid; N-p-Chlorobenzoyl-5-methoxy-2-methylindole-3-acetic acid; 1-(4-Chlorobenzoyl)-5-methoxy-2-methylindol-3-ylacetic acid</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>Indole-3-acetic acid, 1-(p-chlorobenzoyl)-5-methoxy-2-methyl-</td>
</tr>
<tr>
<td>Chemical Family</td>
<td>Not available.</td>
</tr>
<tr>
<td>Chemical Formula</td>
<td>C19-H16-N-O4-Cl</td>
</tr>
<tr>
<td>Supplier</td>
<td>SPECTRUM LABORATORY PRODUCTS INC.</td>
</tr>
<tr>
<td>Address</td>
<td>14422 S. SAN PEDRO STREET</td>
</tr>
<tr>
<td>City</td>
<td>GARDENA, CA 90248</td>
</tr>
</tbody>
</table>

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300
CALL (310) 516-8000

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Indomethacin</td>
<td>53-86-1</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Toxicological Data on Ingredients

<table>
<thead>
<tr>
<th>Route</th>
<th>Acute (LD50):</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORAL (LD50):</td>
<td>Acute: 2.42 mg/kg [Rat]. 13 mg/kg [Mouse]. 100 mg/kg [Guinea pig].</td>
</tr>
</tbody>
</table>
Section 3. Hazards Identification

Potential Acute Health Effects

- Very hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Severe over-exposure can result in death.

Potential Chronic Health Effects

- CARCINOGENIC EFFECTS: Not available.
- MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.
- TERATOGENIC EFFECTS: Not available.
- DEVELOPMENTAL TOXICITY: Not available.

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures

Eye Contact

- Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.

Skin Contact

- Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

Serious Skin Contact

- Not available.

Inhalation

- If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation

- Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion

- If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion

- Not available.

Section 5. Fire and Explosion Data

Flammability of the Product

- May be combustible at high temperature.

Auto-Ignition Temperature

- Not available.

Flash Points

- Not available.

Flammable Limits

- Not available.

Products of Combustion

- These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Fire Hazards in Presence of Various Substances

- Slightly flammable to flammable in presence of heat.

Explosion Hazards in Presence of Various Substances

- Risks of explosion of the product in presence of mechanical impact: Not available.
- Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions

- SMALL FIRE: Use DRY chemical powder.
- LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards

- Material in powder form, capable of creating a dust explosion. As with most organic solids, fire is possible at elevated temperatures

Special Remarks on Explosion Hazards

- Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Section 6. Accidental Release Measures

Small Spill
Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill
Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7. Handling and Storage

Precautions
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection
Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits
Not available.

Section 9. Physical and Chemical Properties

Physical state and appearance
Solid. (Powdered solid. Crystalline powder. Crystalline solid.)

Molecular Weight
357.79 g/mole

pH (1% soln/water)
Not applicable.

Boiling Point
Not available.

Melting Point
158° C (316.4° F) - 165° C.

Critical Temperature
Not available.

Specific Gravity
Not available.

Vapor Pressure
Not applicable.

Vapor Density
Not available.

Volatility
Not available.

Odor Threshold
Not available.

Water/Oil Dist. Coeff.
The product is more soluble in oil; log(oil/water) = 4.3

Ionicity (in Water)
Not available.

Dispersion Properties
See solubility in water, diethyl ether, acetone.

Solubility
Soluble in diethyl ether, acetone. Insoluble in cold water. Soluble in Ethanol, castor oil. Solubility in Chloroform: 1 gram/30 ml Solubility in Water: 0.937 mg/l at 25 deg. C.
### Section 10. Stability and Reactivity Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>The product is stable.</td>
</tr>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Excess heat, dust generation, incompatible materials</td>
</tr>
<tr>
<td>Incompatibility with various substances</td>
<td>Reactive with alkalis.</td>
</tr>
<tr>
<td>Corrosivity</td>
<td>Non-corrosive in presence of glass.</td>
</tr>
<tr>
<td>Special Remarks on Reactivity</td>
<td>Sensitive to light.</td>
</tr>
<tr>
<td>Special Remarks on Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Polymerization</td>
<td>Will not occur.</td>
</tr>
</tbody>
</table>

### Section 11. Toxicological Information

#### Routes of Entry
- Inhalation, Ingestion.

#### Toxicity to Animals
- Acute oral toxicity (LD₅₀): 2.42 mg/kg [Rat].

#### Chronic Effects on Humans
- **MUTAGENIC EFFECTS:** Mutagenic for bacteria and/or yeast.
- Very hazardous in case of ingestion.
- Slightly hazardous in case of skin contact (irritant), of inhalation.

#### Other Toxic Effects on Humans
- LD₅₀ [Rabbit] - Route: Oral; Dose: 135 mg/kg
- LD₅₀ [Dog] - Route: Oral; Dose: 160 mg/kg
- LD₅₀ [Cat] - Route: Oral; Dose: 320 mg/kg
- LD₅₀ [Hamster] - Route: Oral; Dose: 81 mg/kg
- LD₅₀ [Rat] - Route: Oral; Dose: 11.5-15 mg/kg
- LD₅₀ [Mouse] - Route: Oral; Dose: 25 mg/kg

#### Special Remarks on Toxicity to Animals
- May cause adverse reproductive effects and birth defects (teratogenic).
- May affect genetic material (mutagenic).

#### Special Remarks on Chronic Effects on Humans
- Tumorigenic: Neoplastic by RTECS (Registry of Toxic Effects of Chemicals Substances) criteria. However not considered carcinogenic by IARC, ACGIH or NTP.

#### Special Remarks on other Toxic Effects on Humans
- Acute Potential Health Effects:
  - Skin: May cause skin irritation.
  - Eyes: May cause eye irritation.
  - Inhalation: May cause respiratory tract irritation.
  - Ingestion: May be fatal if swallowed. Most signs and symptoms of toxicity are referable to the gastrointestinal tract (nausea, vomiting, gastritis, hypermotility, diarrhea, gastrointestinal ulceration with perforation) and central nervous system (convulsions/seizures, drowsiness, lethargy, mental confusion, disorientation, aggressive behavior, headache, dizziness, ataxia, stiffness, general anesthetic, analgesia, coma). Hemorrhage may occur due to a change in blood clotting factors. It may also cause exfoliative dermatitis, Stevens-Johnson syndrom, and may affect the liver (hepatitis), urinary system (hematuria, acute renal failure), cardiovascular system (hypertension, congestive heart failure - fluid retention and edema), respiration (respiratory distress). Chronic Potential Health Effects:
  - Ingestion: Prolonged or repeated ingestion may cause weight loss, and affect the gastrointestinal system (see acute effects), blood (aplastic anemia, normocytic anemia, changes in serum composition), musculoskeletal system (joints), spleen, pituitary gland.

Continued on Next Page
## Section 12. Ecological Information

**Ecotoxicity**

Not available.

**BOD5 and COD**

Not available.

**Products of Biodegradation**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation**

The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation**

Not available.

## Section 13. Disposal Considerations

**Waste Disposal**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Section 14. Transport Information

**DOT Classification**

CLASS 6.1: Poisonous material.

**Identification**

UNNA: 2811 : Toxic solid, organic, n.o.s. (Indomethacin)  
PG: I

**Special Provisions for Transport**

Not available.

**DOT (Pictograms)**

![Poison Pictogram](image)

## Section 15. Other Regulatory Information and Pictograms

**Federal and State Regulations**

Massachusetts RTK: Indomethacin  
TSCA 8(b) inventory: Indomethacin

**California Proposition 65 Warnings**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.  
California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations**

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 200-186-5).  
Canada: Listed on Canadian Domestic Substance List (DSL).  
China: Listed on National Inventory.  
Japan: Listed on National Inventory (ENCS).  
Korea: Listed on National Inventory (KECI).  
Philippines: Listed on National Inventory (PICCS).  
Australia: Listed on AICS.

**Other Classifications**

**WHMIS (Canada)**

CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).

**DSCL (EEC)**

R28- Very toxic if swallowed.  
S36/37- Wear suitable protective clothing and gloves.  
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Continued on Next Page
Indomethacin

HMIS (U.S.A.)

<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>0</td>
<td>E</td>
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National Fire Protection Association (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Specific hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WHMIS (Canada)
(Pictograms)

DSCL (Europe)
(Pictograms)

TDG (Canada)
(Pictograms)

ADR (Europe)
(Pictograms)

Protective Equipment

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

Section 16. Other Information

MSDS Code   I3075

References  Not available.

Other Special Considerations  Major Use: Medication

Validated by Sonia Owen on 3/12/2013.

Verified by Sonia Owen.
Printed 3/12/2013.
Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.