1. Identification of the Substance/Mixture and of the Company/Undertaking

<table>
<thead>
<tr>
<th>Product Code:</th>
<th>70270</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name:</td>
<td>Indomethacin</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>1-(4-chlorobenzoyl)-5-methoxy-2-methyl-1H-indole-3-acetic acid; Indocin;</td>
</tr>
</tbody>
</table>

Relevant identified uses of the substance or mixture and uses advised against

Intended Use: No data available.

Manufacturer Information

- Company Name: Cayman Chemical Company
- Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
- Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
- Information: Cayman Chemical Company +1 (734)971-3335
- Web site address: www.caymanchem.com

2. Hazards Identification

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity: Oral, Category 1</td>
<td>Skull and crossbones</td>
<td>Danger</td>
<td>H300: Fatal if swallowed.</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation, Category 1</td>
<td>Corrosive</td>
<td>Danger</td>
<td>H318: Causes serious eye damage</td>
</tr>
<tr>
<td>Target Organ Systemic Toxicity (single exposure), Category 3</td>
<td>Exclamation point</td>
<td>Warning</td>
<td>H335: May cause respiratory irritation.</td>
</tr>
<tr>
<td>Target Organ Systemic Toxicity (repeated exposure), Category 2</td>
<td>Health hazard</td>
<td>Warning</td>
<td>H413: May cause damage through prolonged or repeated exposure.</td>
</tr>
<tr>
<td>Aquatic Toxicity (Chronic), Category 4</td>
<td>none</td>
<td>Warning</td>
<td>H414: May cause long lasting harmful effects to aquatic life.</td>
</tr>
<tr>
<td>Toxic To Reproduction, Category 1B</td>
<td>Health hazard</td>
<td>Danger</td>
<td>H350: May damage fertility or the unborn child.</td>
</tr>
<tr>
<td>Carcinogenicity, Category 2</td>
<td>Health hazard</td>
<td>Warning</td>
<td>H351: Suspected of causing cancer.</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases:

- H300: Fatal if swallowed.
- H318: Causes serious eye damage
- H335: May cause respiratory irritation.
- H373: May cause damage through prolonged or repeated exposure.
- H413: May cause long lasting harmful effects to aquatic life.
- H350: May damage fertility or the unborn child.
- H351: Suspected of causing cancer.

GHS Precaution Phrases:

- P264: Wash hands thoroughly after handling.
- P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.
- P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
- P260: Do not breathe dust/fume/gas/mist/vapours/spray.
- P273: Avoid release to the environment - if this is not the intended use.
- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P281: Use personal protective equipment as required.

GHS Response Phrases:

- P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P330: Rinse mouth.
- P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P314: Get medical attention/advice if you feel unwell.
P308+313: IF exposed or concerned: Get medical attention/advice.

GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information.

Potential Health Effects (Acute and Chronic):

Causes respiratory tract irritation.

Causes serious eye damage.

Material is irritating to the mucous membranes and upper respiratory tract.

May be fatal if swallowed.

May be harmful by inhalation or skin absorption.

May cause damage through prolonged or repeated exposure.

May cause skin irritation.

May damage fertility or the unborn child.

Suspected of causing cancer.

Target Organs:

Blood, Cardiovascular system, Eyes, Gastrointestinal System, Intestines, Stomach, Kidneys, Respiratory system, Nervous system, Endocrine system, Skin, Lymphatic system, Ureter.

LD 50 / LC 50:

Please refer to Section 11.

Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Indomethacin</td>
<td>53-86-1</td>
<td>100.0 %</td>
<td>200-186-5</td>
<td>R28-37-40-41-48-58-60-61</td>
<td>NL3500000</td>
</tr>
</tbody>
</table>

4. First Aid Measures

In Case of Inhalation:
Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

In Case of Skin Contact:
Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

In Case of Eye Contact:
Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

In Case of Ingestion:
Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

Signs and Symptoms Of Exposure:
Exposure may cause: aggressive behavior, aplastic anemia, changes in tubules, coma, convulsions or seizures, dermatitis, disorientation, drowsiness, gastrointestinal ulceration/bleeding, hemorrhage, hematuria, hepatitis, lethargy, paresthesia, mental confusion, nausea, necrotic changes, numbness, retinal changes, stiffness, spleen and liver change, stomach pains, diarrhea, tumors, ulceration, vomiting.

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

Indication of any immediate medical attention and special treatment needed: No data available.
5. Fire Fighting Measures

Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media: A solid water stream may be inefficient.

Flammable Properties and Hazards: No data available.

Flash Pt: No data.

Autoignition Pt: No data available.

Explosive Limits: LEL: No data. UEL: No data.

Hazardous Combustion Products: No data available.

Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: Avoid raising and breathing dust, and provide adequate ventilation.

As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

Environmental Precautions: Take steps to avoid release into the environment, if safe to do so.

Steps To Be Taken In Case Material Is Released Or Spilled: Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

7. Handling and Storage

Precautions To Be Taken in Handling: Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.

Precautions To Be Taken in Storing: Keep container tightly closed. Store in accordance with information listed on the product insert.

Other Precautions: Light sensitive.

Hazard Label Information: Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indomethacin</td>
<td>53-86-1</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Britain EH40</th>
<th>France VL</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indomethacin</td>
<td>53-86-1</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>


Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Eye Protection: Safety glasses.

Protective Gloves: Compatible chemical-resistant gloves.

Other Protective Clothing: Lab coat.

Respiratory Equipment (Specify Type): NIOSH approved respirator, as conditions warrant.

Work/Hygienic/Maintenance Practices: Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.

Environmental Exposure Controls: No data available.
9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical States: [ ] Gas [ ] Liquid [X] Solid

Appearance and Odor: A crystalline solid

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Solubility Notes: ~0.1 mg/ml in 0.1 M Na2CO3 (with warming); ~6.5 mg/ml in EtOH; ~17.5 mg/ml in DMF & DMSO;

Autoignition Pt: No data available.

Explosive Properties: No data available.

Oxidizing Properties: No data available.

Other Information

Percent Volatile: No data.

Formula: C19H16ClNO4

Molecular Weight: 357.80

10. Stability and Reactivity

Reactivity: No data available.

Stability: Unstable [ ] Stable [X]

Stability Note(s): Stable if stored in accordance with information listed on the product insert.

Conditions To Avoid: No data available.

Polymerization: Will occur [ ] Will not occur [X]

Incompatibility - Materials To Avoid: strong bases

Hazardous Decomposition Or Byproducts: carbon dioxide

11. Toxicological Information

Toxicological Information: The toxicological effects of this product have not been thoroughly studied.

Indomethacin - Toxicity Data: Oral LD50 (rat): 15 mg/kg;

Chronic Toxicological Effects: Indomethacin - Investigated as a mutagen, reproductive effector, and tumorigen.

Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

Indomethacin RTECS Number: NL3500000

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indomethacin</td>
<td>53-86-1</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>
12. Ecological Information

General Ecological Information: Avoid release into the environment. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name: Toxic solid, organic, n.o.s. (Indomethacin)
DOT Hazard Class: 6.1
DOT Hazard Label: POISON
UN/NA Number: 2811
Packing Group: II

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name: Toxic solid, organic, n.o.s. (Indomethacin)
UN Number: 2811
Hazard Class: 6.1 - POISON
Packing Group: II

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name: Toxic solid, organic, n.o.s. (Indomethacin)
UN Number: 2811
Hazard Class: 6.1 - POISON
Packing Group: II
IATA Classification: 6.1

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes: T+: Very Toxic; Carcinogenic Hazard: 3; Reproductive Hazard: 2

European Community Risk and Safety Phrases:

- R28 - Very toxic if swallowed.
- R37 - Irritating to respiratory system.
- R40 - Limited evidence of a carcinogenic effect
- R41 - Risk of serious damage to the eyes.
- R48 - Danger of serious damage to health by prolonged exposure.
- R58 - May cause long-term adverse effects in the environment.
- R60 - May impair fertility.
- R61 - May cause harm to the unborn child.
- S22 - Do not breathe dust.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S28 - After contact with skin, wash immediately with plenty of soap-suds.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
- S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Indomethacin</td>
<td>53-86-1</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
### Other US EPA or State Lists

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indomethacin</td>
<td>53-86-1</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

**Regulatory Information Statement:** This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### 16. Other Information

**Revision Date:** 10/02/2013

**Company Policy or Disclaimer**

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required