# SAFETY DATA SHEET

## Cypermethrin

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

<table>
<thead>
<tr>
<th>1.1 Product Code:</th>
<th>24117</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name:</td>
<td>Cypermethrin</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>3-(2,2-dichloroethenyl)-2,2-dimethyl-cyclopropanecarboxylic acid, cyano(3-phenoxyphenyl)methyl ester;</td>
</tr>
</tbody>
</table>

### 1.2 Relevant identified uses of the substance or mixture and uses advised against:

Relevant identified uses: For research use only, not for human or veterinary use.

### 1.3 Details of the Supplier of the Safety Data Sheet:

<table>
<thead>
<tr>
<th>Company Name:</th>
<th>Cayman Chemical Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web site address:</td>
<td><a href="http://www.caymanchem.com">www.caymanchem.com</a></td>
</tr>
<tr>
<td>Information:</td>
<td>Cayman Chemical Company</td>
</tr>
</tbody>
</table>

### 1.4 Emergency telephone number:

<table>
<thead>
<tr>
<th>Emergency Contact:</th>
<th>CHEMTREC Within USA and Canada: +1 (800)424-9300</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CHEMTREC Outside USA and Canada: +1 (703)527-3887</td>
</tr>
</tbody>
</table>

### Section 2. Hazards Identification

#### 2.1 Classification of the Substance or Mixture:

- Acute Toxicity: Inhalation, Category 4
- Acute Toxicity: Oral, Category 3
- Skin Corrosion/Irritation, Category 2
- Skin Sensitization, Category 1
- Specific Target Organ Toxicity (single exposure), Category 3
- Specific Target Organ Toxicity (repeated exposure), Category 2
- Aquatic Toxicity (Acute), Category 1
- Aquatic Toxicity (Chronic), Category 1

#### 2.2 Label Elements:

- **GHS Signal Word:** Danger
- **GHS Hazard Phrases:**
  - H301: Toxic if swallowed.
  - H315: Causes skin irritation.
  - H317: May cause an allergic skin reaction.
  - H322: Harmful if inhaled.
  - H335: May cause respiratory irritation.
  - H373: May cause damage to {organs} through prolonged or repeated exposure.
  - H400: Very toxic to aquatic life.
  - H410: Very toxic to aquatic life with long lasting effects.
GHS Precaution Phrases:
P260: Do not breathe {dust/fume/gas/mist/vapors/spray}.
P264: Wash {hands} thoroughly after handling.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P314: Get medical attention/advice if you feel unwell.
P330: Rinse mouth.
P332+313: If skin irritation occurs, get medical advice/attention.
P333+313: If skin irritation or rash occurs, seek medical advice/attention.
P362+364: Take off contaminated clothing and wash it before reuse.
P391: Collect spillage.

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

2.3 Adverse Human Health Effects and Symptoms:
Causes skin irritation.
Harmful if inhaled.
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by skin absorption.
May cause an allergic skin reaction.
May cause eye or respiratory system irritation.
May cause damage to {organs} through prolonged or repeated exposure.
Toxic if swallowed.
Very toxic to aquatic life with long lasting effects.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS # / RTECS #</th>
<th>Hazardous Components (Chemical Name)/REACH Registration No.</th>
<th>Concentration</th>
<th>EC No./EC Index No.</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>52315-07-8</td>
<td>Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester</td>
<td>100.0 %</td>
<td>257-842-9 607-421-00-4</td>
<td>Acute Tox.(O) 3: H301 Acute Tox.(I) 4: H332 STOT (SE) 3: H335 Aquatic (A) 1: H400 Aquatic (C) 1: H410 Skin Corr. 2: H315 Skin Sens. 1: H317 STOT (RE) 2: H373</td>
</tr>
</tbody>
</table>
Section 4. First Aid Measures

4.1 Description of 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 15 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 15 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.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.

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

5.2 Flammable Properties and Hazards:

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 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).

6.2 Environmental Precautions:

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

6.3 Methods and Material For Containment and Cleaning:

Contain spill and collect, as appropriate.
Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling:

Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing:

Keep container tightly closed.
Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Chemical Name</th>
<th>Jurisdiction</th>
<th>Recommended Exposure Limits</th>
<th>Notations</th>
</tr>
</thead>
<tbody>
<tr>
<td>52315-07-8</td>
<td>Cyclopropanecarboxylic acid,</td>
<td>ACGIH TLV</td>
<td>CEIL: 5 mg/m3 (salt)</td>
<td></td>
</tr>
</tbody>
</table>
3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl es
52315-07-8 Cyclopropanecarboxylic acid,
3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl es
(continued)

<table>
<thead>
<tr>
<th>Country</th>
<th>TWA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>France VL</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td>OSHA PELs</td>
<td>TWA: 5 mg/m³</td>
</tr>
<tr>
<td>Britain EH40</td>
<td>TWA: 5.0 mg/m³</td>
</tr>
</tbody>
</table>

8.2 Exposure Controls:

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

8.2.2 Personal protection equipment:
- **Eye Protection:** Safety glasses
- **Protective Gloves:** Compatible chemical-resistant gloves
- **Other Protective Clothing:** Lab coat
- **Respiratory Equipment:** NIOSH approved respirator, as conditions warrant.

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

No data available.

### Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical States</strong></td>
<td>[ ] Gas [ ] Liquid [X] Solid</td>
</tr>
<tr>
<td><strong>Appearance and Odor</strong></td>
<td>A solid</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Melting Point</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Boiling Point</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Flash Pt</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>No data available.</td>
</tr>
<tr>
<td><strong>Explosive Limits</strong></td>
<td>LEL: No data. UEL: No data.</td>
</tr>
<tr>
<td><strong>Vapor Pressure (vs. Air or mm Hg)</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Vapor Density (vs. Air = 1):</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Specific Gravity (Water = 1):</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Solubility in Water</strong></td>
<td>No data</td>
</tr>
<tr>
<td><strong>Solubility Notes</strong></td>
<td>Soluble (slightly) in: DMSO; MeOH;</td>
</tr>
<tr>
<td><strong>Octanol/Water Partition Coefficient</strong></td>
<td>No data</td>
</tr>
</tbody>
</table>
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Autoignition Pt: No data.
Decomposition Temperature: No data.
Viscosity: No data.

9.2 Other Information
Percent Volatile: No data.
Molecular Formula & Weight: C22H19Cl2NO3 416.3

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable [    ] Stable [ X ]
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
Polymerization: Will occur [    ] Will not occur [ X ]
10.4 Conditions To Avoid: No data available.
10.5 Incompatibility - Materials strong oxidizing agents
To Avoid:
10.6 Hazardous carbon dioxide
Decomposition or carbon monoxide
Byproducts: hydrogen chloride gas
nitrogen oxides

Section 11. Toxicological Information

11.1 Information on Toxicological Effects: The toxicological effects of this product have not been thoroughly studied.
Cypermethrin - Toxicity Data: Oral LD50 (rat): 57500 ug/kg; Intraperitoneal LD50 (rat): 404 mg/kg;
Oral LD50 (mouse): 24570 ug/kg; Intraperitoneal LD50 (mouse): 25 mg/kg;
Cypermethrin - Investigated as an agricultural chemical, 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.
Cypermethrin RTECS Number: GZ1250000

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>52315-07-8</td>
<td>Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl es</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.
12.2 Persistence and Degradability: No data available.
12.3 Bioaccumulative Potential: No data available.
12.4 Mobility in Soil: No data available.
12.5 Results of PBT and vPvB assessment: No data available.
12.6 Other adverse effects: No data available.
Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Toxic solid, organic, n.o.s. (Cypermethrin)
DOT Hazard Class: 6.1 - POISON
UN/NA Number: UN2811 Packing Group: III

14.1 LAND TRANSPORT (European ADR/RID):

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

14.3 AIR TRANSPORT (ICAO/IATA):

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

Additional Transport Information:
Transport in accordance with local, state, and federal regulations.
When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>52315-07-8</td>
<td>Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl es</td>
<td>No</td>
<td>No</td>
<td>Yes-Cat. N106</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Other US EPA or State Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>52315-07-8</td>
<td>Cyclopropanecarboxylic acid, 3-(2,2-dichloroethenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl es</td>
<td>CAA HAP, ODC: Yes - Cat.; CWA NPDES: No; TSCA: No; CA PROP.65: No</td>
</tr>
</tbody>
</table>

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.
### Section 16. Other Information

<table>
<thead>
<tr>
<th><strong>Revision Date:</strong></th>
<th>04/21/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Additional Information About This Product:</strong></td>
<td>No data available.</td>
</tr>
<tr>
<td><strong>Company Policy or Disclaimer:</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>