Section 1. Identification of the Substance/Mixture and of the

1.1 Product Code: 10489
Product Name: Candesartan cilexetil
Synonyms: 2-ethoxy-1-[[2'-(2H-tetrazol-5-yl)[1,1'-biphenyl]-4-yl][methyl]-1-[[[(cyclohexyloxy)carbonyl]oxy]ethyl ester-1H-Benimidazole-7-carboxylic acid; TCV-116;

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
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

Section 2. Hazards Identification

GHS Classification
<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Placard</th>
<th>Key word</th>
<th>GHS hazard phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic To Reproduction, Category 2</td>
<td>Health hazard</td>
<td>Warning</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>Aquatic Toxicity (Acute), Category 1</td>
<td>Pollution</td>
<td>Warning</td>
<td>Very toxic to aquatic life</td>
</tr>
</tbody>
</table>

GHS Hazard Phrases:
H361: Suspected of damaging fertility or the unborn child.
H400: Very toxic to aquatic life.

GHS Precaution Phrases:
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.
P273: Avoid release to the environment.

GHS Response Phrases:
P308+313: IF exposed or concerned: Get medical attention/advice.
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:
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
Suspected of damaging fertility or the unborn child.
Very toxic to aquatic life.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Target Organs: No data available.
LD 50 / LC 50: Please refer to Section 11.
Medical Conditions Generally Aggravated By Exposure: No data available.

Section 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>
</tr>
</thead>
<tbody>
<tr>
<td>1. Candesartan cilexetil</td>
<td>145040-37-5</td>
<td>100.0 %</td>
<td>NA</td>
<td>R62-50</td>
</tr>
</tbody>
</table>

Multi-region format
Section 4. First Aid Measures

4.1 Description of First Aid Measures:

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

4.1.2 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.

4.1.3 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.

4.1.4 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.

4.2 Important Symptoms and Effects, Both Acute and Delayed: No data available.

4.3 Indication of any immediate medical attention and special treatment needed: No data available.

Section 5. Fire Fighting Measures

5.1 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.

5.2 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.

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 Up: 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.

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

Section 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>
</table>
### Section 9. Physical and Chemical Properties

#### 9.1 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:**
  - ~0.5 mg/ml in 1:1 DMSP:PBS (pH 7.2); ~3 mg/ml in EtOH; ~30 mg/ml in DMF & DMSO;

- **Autoignition Pt:**
  - No data.

- **Explosive Properties:**
  - No data available.

- **Oxidizing Properties:**
  - No data available.

#### 9.2 Other Information

- **Percent Volatile:**
  - No data.

- **Formula:**
  - C33H34N6O6

- **Molecular Weight:**
  - 610.70

### 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.

#### 10.4 Conditions To Avoid:
- No data available.

#### 10.5 Polymerization:
- Will occur [ ]
- Will not occur [X]
Section 10.5 Incompatibility - Materials To Avoid:
No data available.

Section 10.6 Hazardous Decomposition Or Byproducts:
No data available.

Section 11. Toxicological Information

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

Candesartan cilexetil - Toxicity Data: Oral LD50 (rat): > 2 g/kg; Oral LD50 (mouse): > 2 g/kg; Oral TDLo (rat): 3 mg/kg;

Chronic Toxicological Effects:
Candesartan cilexetil - Investigated as a reproductive effector.
Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.
See actual entry in RTECS for complete information.
Candesartan cilexetil RTECS Number: DD6672500

<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>1. Candesartan cilexetil</td>
<td>145040-37-5</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.

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: Environmentally hazardous substance, solid, n.o.s. (Candesartan cilexetil)
DOT Hazard Class: 9
DOT Hazard Label: CLASS 9
UN/NA Number: 3077
Packing Group: III

14.1 LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Candesartan cilexetil)
UN Number: 3077
Hazard Class: 9 - CLASS 9
Packing Group: III

14.3 AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name: Environmentally hazardous substance, solid, n.o.s. (Candesartan cilexetil)
UN Number: 3077
Hazard Class: 9 - CLASS 9
Packing Group: III
IATA Classification: 9

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

**European Community Hazard Symbol codes**  
T: Toxic; N: Dangerous for the environment; Reproductive Hazard: 3

**European Community Risk and Safety Phrases**
- R50 - Very toxic to aquatic organisms.
- R62 - Risk of impaired fertility.
- S24/25 - Avoid contact with skin and eyes.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

**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. Candesartan cilexetil</td>
<td>145040-37-5</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>1. Candesartan cilexetil</td>
<td>145040-37-5</td>
<td>No</td>
<td>No</td>
<td>No</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.

Section 16. Other Information

**Revision Date:** 09/18/2013

**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