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

<table>
<thead>
<tr>
<th>1.1 Product Code:</th>
<th>9001819</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Name:</td>
<td>Oxandrolone</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>(4bS,7S,9aS,9bR,11aS)-tetradecahydro-7-hydroxy-4aS,6aS,7-trimethyl-cyclopenta[5,6]naphtho[1,2-c]pyran-2(1H)-one; Anavar; NSC 67068; Oxandrin; SC 11585;</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>+1 (734)971-3335</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:

#### 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:

- Acute Toxicity: Inhalation, Category 4
- Acute Toxicity: Skin, Category 4
- Toxic To Reproduction, Category 1B

#### 2.1.2 Classification according to Directive 1999/45/EC:

- **T:** Toxic
- Reproductive Hazard: 2
- Risk Phrases: R20/21, R60
- For full text of R--phrases: see SECTION 15.

### 2.2 Label Elements:

#### 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:

- **GHS Signal Word:** Danger
- **GHS Hazard Phrases:**
  - H332: Harmful if inhaled.
  - H312: Harmful in contact with skin.
  - H360: May damage fertility or the unborn child.
- **GHS Precaution Phrases:**
  - P261: Avoid breathing {dust/fume/gas/mist/vapours/spray}.
  - P280: Wear {protective gloves/protective clothing/eye protection/face protection}.
  - 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:**
  - P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
  - P312: Call a {POISON CENTER/doctor/...} if you feel unwell.
  - P302+352: IF ON SKIN: Wash with plenty of soap and water.
P363: Wash contaminated clothing before reuse.
P308+313: IF exposed or concerned: Get medical attention/advice.

**GHS Storage and Disposal Phrases:**
No phrases apply.

### 2.2.2 Labeling according to Directive 1999/45/EC:

**T**

Reproductive Hazard: 2

**2.3 Adverse Human Health** Harmful if inhaled.
**Effects and Symptoms:** Harmful in contact with skin.

- Material may be irritating to the mucous membranes and upper respiratory tract.
- May be harmful by ingestion.
- May cause eye, skin, or respiratory system irritation.
- May damage fertility or the unborn child.
- 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>Risk Phrases/ GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>53-39-4 RN6800700</td>
<td>Oxandrolone</td>
<td>100.0 %</td>
<td>200-172-9 NA</td>
<td>T; Rp:2, R20/21-60 Acute Tox.(D) 4: H312 Acute Tox.(I) 4: H332 Toxic Repro. 1B: H360</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.
- Use water spray to cool fire-exposed containers.
- 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.
- Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
- Use water spray to cool fire-exposed containers.

## 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).
- 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.
- 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>Partial Chemical Name</th>
<th>Britain EH40</th>
<th>France VL</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>53-39-4</td>
<td>Oxandrolone</td>
<td>No data.</td>
<td>No data.</td>
<td>No data.</td>
</tr>
</tbody>
</table>

8.2 **Exposure Controls:**

8.2.1 **Engineering Controls (Ventilation etc.):**
- 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:**
- Do not take internally.
- Facilities storing or utilizing this material should be equipped with an eyewash and a
 safety shower.
Wash thoroughly after handling.

### 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>Physical States</td>
<td>[ ] Gas [ ] Liquid [X] Solid</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>A crystalline solid</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No data.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data.</td>
</tr>
<tr>
<td>Flash Pt</td>
<td>No data.</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data.</td>
</tr>
<tr>
<td>Explosive Limits</td>
<td>LEL: No data.</td>
</tr>
<tr>
<td></td>
<td>UEL: No data.</td>
</tr>
<tr>
<td>Vapor Pressure (vs. Air or mm Hg)</td>
<td>No data.</td>
</tr>
<tr>
<td>Vapor Density (vs. Air = 1)</td>
<td>No data.</td>
</tr>
<tr>
<td>Specific Gravity (Water = 1)</td>
<td>No data.</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>No data.</td>
</tr>
<tr>
<td>Solubility Notes</td>
<td>~0.25 mg/ml in 1:3 DMF:PBS (pH 7.2); ~2 mg/ml in EtOH; ~20 mg/ml in DMSO; ~30 mg/ml in DMF;</td>
</tr>
<tr>
<td>Autoignition Pt</td>
<td>No data.</td>
</tr>
</tbody>
</table>

#### 9.2 Other Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Formula &amp; Weight</td>
<td>C19H30O3 306.4</td>
</tr>
</tbody>
</table>

### 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 Incompatibility - Materials To Avoid: No data available.

#### 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.

Oxandrolone - Toxicity Data: Oral TDLO (man): 2400 µg/kg/2W (intermittent); Oral LD50 (rat): >10 g/kg; Oral LD50 (mouse): 1832 mg/kg; Subcutaneous LD50 (rat): >10 g/kg; Subcutaneous LD50 (mouse): >11 g/kg;

Chronic Toxicological Effects: Oxandrolone - 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.

Oxandrolone RTECS Number: RN6800700

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

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: Not dangerous goods.
   DOT Hazard Class: 
   UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):
   ADR/RID Shipping Name: Not dangerous goods.
   UN Number: 
   Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):
   ICAO/IATA Shipping Name: Not dangerous goods.
   Additional Transport Information: Transport in accordance with local, state, and federal regulations.

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>53-39-4</td>
<td>Oxandrolone</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Other US EPA or State Lists

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
</tr>
</thead>
<tbody>
<tr>
<td>53-39-4</td>
<td>Oxandrolone</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Multi-region format
European Community Hazard Symbol codes:

Reproductive Hazard: 2

European Community Risk and Safety Phrases:

R20/21  Harmful by inhalation and in contact with skin.
R60   May impair fertility.
S22  Do not breathe dust.
S24/25 Avoid contact with skin and eyes.
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.)

Regulatory Information

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: 12/12/2013
Additional Information About This Product: No data available.

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