1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Vandetanib

UN/ID No: UN3077

Recommended use: For research use only

Supplier Address: Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address: technical@abcam.com

Emergency telephone: Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Category 4</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Category 1B</td>
</tr>
<tr>
<td>Specific target organ systemic toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute aquatic toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Chronic aquatic toxicity</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

GHS Label elements, including precautionary statements

Signal Word: Danger
Hazard statements
H302 - Harmful if swallowed
H360 - May damage fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P308 + P313 - IF exposed or concerned: Get medical advice/ attention
P501 - Dispose of contents/ container to an approved waste disposal plant
P405 - Store locked up
P314 - Get medical advice/ attention if you feel unwell
P391 - Collect spillage

Other information
Caution – substance not yet tested completely
May be irritating to mucous membranes
May cause irritation of respiratory tract
May be harmful by inhalation or skin absorption
May cause damage to { uterus, testicles, ovaries} through prolonged or repeated exposure
May cause eye/skin irritation
May cause respiratory system irritation
Suspected of damaging fertility or the unborn child
Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Classification (Reg. 1272/2008)</th>
</tr>
</thead>
</table>
| Vandetanib    | 443913-73-3    | 100      | STOT RE 2 (H373)  
|               |                |          | Repr. 1B (H360F)  
|               |                |          | Acute Tox. 4 (H302)  
|               |                |          | Aquatic Chronic 1 (H410) |

For the full text of the H-Statements mentioned in this Section, see Section 16
4. FIRST AID MEASURES

General advice
If symptoms persist, call a physician.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Get medical attention immediately if symptoms occur.

Inhalation
Move to fresh air. If not breathing, give artificial respiration. Administer oxygen if breathing is difficult and you are trained.

Ingestion
Rinse mouth. Get medical attention. Never give anything by mouth to an unconscious person. Do NOT induce vomiting unless directed to do so by medical personnel.

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties
Not flammable.

Flash point
Not determined

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data

| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge   | None. |

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid inhalation of dust. Avoid dust formation. Ensure adequate ventilation.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Try to prevent the material from entering drains or water courses.

Methods for containment
Prevent further leakage or spillage if safe to do so.

Methods for cleaning up
Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically and collect in suitable container for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

Other information
Refer to protective measures listed in sections 7 and 8.

7. HANDLING AND STORAGE

Advice on safe handling
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not breathe vapors/dust/mist. Avoid prolonged or repeated exposure. Do not eat, drink or smoke when using this product.
Technical measures/Storage conditions
Keep out of the reach of children. Keep container tightly closed in a dry and well-ventilated place. Store at -20 Celsius. Store under desiccating conditions.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Engineering measures
- Showers
- Eyewash stations
- Ventilation systems

#### Personal protective equipment

<table>
<thead>
<tr>
<th>Eye/face protection</th>
<th>Tightly fitting safety goggles.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin and body protection</td>
<td>No special protective equipment required.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.</td>
</tr>
</tbody>
</table>

#### Hygiene measures
When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>No information available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor Threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content(%)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

#### Odor
No information available.

#### Physical State @20°C
Solid

#### Autoignition temperature
No information available.

#### Boiling point/boiling range
No information available.

#### Flammability Limits in Air
No information available.

#### Solubility
Soluble in DMSO to 50 mM and in ethanol to 10 mM.

#### Vapor density
No data available.

### 10. STABILITY AND REACTIVITY

#### Stability
Stable under recommended storage conditions.

#### Incompatible products
None known based on information supplied.

#### Conditions to avoid
No information available.

#### Hazardous decomposition products
No information available.

#### Hazardous polymerization
Hazardous polymerization does not occur.
11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information
Harmful if swallowed

Ingestion
Harmful if swallowed

Chronic toxicity

Reproductive toxicity
Product is or contains a chemical which is a known or suspected reproductive hazard

Developmental Toxicity
Contains ingredients that have suspected developmental hazards Possible risk of harm to the unborn child May cause birth defects

Target Organ Effects
None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity
TOXIC TO AQUATIC ORGANISMS. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods
Dispose of in accordance with local regulations.

Contaminated packaging
Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT

Proper shipping name
Environmentally hazardous substance, solid, n.o.s

Hazard class
9.0

UN/ID No
UN3077

Packing group
III

IATA

UN/ID No
UN3077

Proper shipping name
Environmentally hazardous substance, solid, n.o.s

Hazard class
9.0

Packing group
III

ADR

Proper shipping name
Environmentally hazardous substance, solid, n.os

Hazard class
9.0

UN/ID No
UN3077

Packing group
III

15. REGULATORY INFORMATION
U.S. Federal Regulations

SARA 313
Section 3T3 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories
Acute Health Hazard: yes
Chronic Health Hazard: yes
Fire Hazard: no
Sudden Release of Pressure Hazard: no
Reactive Hazard: no

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

International Regulations

WHMIS Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3
H373 - May cause damage to organs through prolonged or repeated exposure
H360F - May damage fertility
H302 - Harmful if swallowed
H410 - Very toxic to aquatic life with long lasting effects

Hazard statements
H302 - Harmful if swallowed
H360 - May damage fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS