1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier
   Product Name: Vandetanib
   Catalog No.: T1656
   CAS No.: 443913-73-3

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses: Laboratory chemicals, manufacture of substances.

1.3 Details of the supplier of the safety data sheet
   Company: Target Molecule Corp.
   Tel: +1 (857) 239-0968
   Fax: +1 832 582-8590

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture:
   - GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
     Acute toxicity, oral (Category 4) H302
     Reproductive toxicity (Category 1A, 1B) H360
     Specific target organ toxicity, repeated exposure (Category 2) H373
     Hazardous to the aquatic environment, long-term hazard (Category 1) H410

2.2 GHS Label elements, including precautionary statements:
   Pictogram:
   GHS Signal Word: Danger
   Hazard statement(s):
   - H302 Harmful if swallowed
   - H360 May damage fertility or the unborn child
   - H373 Causes damage to organs through prolonged or repeated exposure
   - H410 Very toxic to aquatic life with long lasting effects
   Precautionary statement(s):
   - 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.
   - P281 Use personal protective equipment as required.
   - P301+P312 IF SWALLOWED: call a POISON CENTER/doctor/physician IF you feel unwell.
   - P308+P313 IF exposed or concerned: Get medical advice/attention.
   - P314 Get medical advice/attention if you feel unwell.
   - P330 Rinse mouth.
   - P391 Collect spillage.
   - P405 Store locked up.
   - P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

| Synonyms | N-(4-bromo-2-fluorophenyl)-6-methoxy-7-[(1-methyl-4-piperidinyl)methoxy]-4-quinazolinamine |
| Formula   | C_{22}H_{24}BrFN_{4}O_{2} |
| Molecular weight | 475.31 mg/mol |
| CAS-No.   | 443913-73-3 |

4. FIRST AID MEASURES

4.1 Description of first aid measures

4.11 In Case of Inhalation
Remove to fresh air; if breathing is difficult, give oxygen; if breathing stops, give artificial respiration.

4.12 In Case of Skin Contact
Flush with copious amounts of water; remove contaminated clothing and shoes; call a physician.

4.13 In Case of Eye Contact:
Check for and remove contact lenses and flush with copious amounts of water; assure adequate flushing by separating the eye lids with fingers; call a physician.

4.14 In Case of Ingestion
Wash out mouth with copious amounts of water; call a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2).

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

5. FIREFIGHTING MEASURES

5.1 Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special protective equipment for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.3 Special hazards arising from the substance or mixture

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Avoid dust formation. Avoid breathing vapors, mist or gas. Avoid breathing dust. 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
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

8.2.1 Engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

8.2.2 Personal protective equipment

Eye protection : Safety goggles with side-shields.
Hand protection : Protective gloves.
Skin and body protection : Impervious clothing.
Respiratory protection : Suitable respirator.
Environmental exposure controls : Do not let product enter enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Data Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor</td>
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<tr>
<td>Odor threshold</td>
<td>No data available</td>
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<tr>
<td>pH</td>
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</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
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</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
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</tr>
<tr>
<td>Vapor density</td>
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</tr>
<tr>
<td>Relative density</td>
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</tr>
<tr>
<td>Water solubility</td>
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</tr>
<tr>
<td>Partition coefficient:</td>
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<tr>
<td>octanol/water</td>
<td></td>
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<tr>
<td>Auto-ignition temperature</td>
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<tr>
<td>Decomposition temperature</td>
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<tr>
<td>Viscosity</td>
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<tr>
<td>Explosive properties</td>
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</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY
10.1 Reactivity
No data available.
10.2 Chemical stability
Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions
No data available.
10.4 Conditions to avoid
No data available.
10.5 Materials to avoid
Strong oxidizing agents.
10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - see section 5
Other decomposition products - no data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
Toxicity Data: Oral TDLO (mouse): 25 mg/kg; Oral TDLO (rat): 650 mg/kg/13D (intermittent); Oral TDLO (human): 60.2 mg/kg/14D (intermittent)
Skin corrosion/irritation
No data available.
Serious eye damage/eye irritation
No data available.
Respiratory or skin sensitisation
No data available.
Germ cell mutagenicity
No data available.
Carcinogenicity
IARC: No component of this product present at a level equal to or greater than 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at a level equal to or greater than 0.1% is identified as a potential or confirmed carcinogen by ACGIH.
NTP: No component of this product present at a level equal to or greater than 0.1% is identified as a anticipated or confirmed carcinogen by NTP.
OSHA: No component of this product present at a level equal to or greater than 0.1% is identified as a potential or confirmed carcinogen by OSHA.
Reproductive toxicity
No data available.
Specific target organ toxicity - single exposure
No data available.
Specific target organ toxicity - repeated exposure
No data available.
Aspiration hazard
No data available.
Additional Information
RTECS: VA0918650
The toxicological effects of this product have not been thoroughly studied.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
No data available.
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
   BT/vPvB assessment not available as chemical safety assessment not required/not conducted.
12.6 Other adverse effects
   No data available.

13. DISPOSAL CONSIDERATIONS
13.1 Waste treatment methods
   Product
   Dispose substance in accordance with prevailing country, federal, state and local regulations.
   Contaminated packaging
   Dispose substance in accordance with prevailing country, federal, state and local regulations.

14. TRANSPORT INFORMATION
   DOT (US)
   Not dangerous goods
   IMDG
   Not dangerous goods
   IATA
   Not dangerous goods

15. REGULATORY INFORMATION
   SARA 302 Components
   No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
   SARA 313 Components
   This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
   SARA 311/312 Hazards
   Acute Health Hazard. Chronic Health Hazard.
   Massachusetts Right to Know Components
   No components are subject to the Massachusetts Right to Know Act.
   Pennsylvania Right to Know Components
   No components are subject to the Pennsylvania Right to Know Act.
   New Jersey Right to Know Components
   No components are subject to the New Jersey Right to Know Act.
   California Prop. 65 Components
   This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION
   The above information is believed to be correct based on the present state of our knowledge but does not purport to be complete. The product is for research and trained personnel use only. Target Molecule disclaims all liability for any damage resulting from handling or from contact with the above product.