1. IDENTIFICATION

1.1 Product Identifier:  Adamantane  P/N: 970489.901

1.2 Product Use:  For laboratory use only; for use only with TA instruments.  Not for drug, household or other uses.

1.3 Supplier Information:

   EU:
   TA Instruments, A Division of Waters NV/SA
   ConneXion Business Park
   Brusselssteenweg 500
   B-1731 Zellik, Belgium
   Phone:  32/2 706 00 80
   Fax:  32/2 706 00 81
   Email: Belgium@tainstruments.com

   1.4 Emergency Telephone Number
   FOR CHEMICAL EMERGENCY
   24 Hours per Day, 7 Days per Week
   Call CHEMTREC 800-424-9300
   Outside N. America call collect
   +1 703-527-3887
   SDS email inquiries:
   info@tainstruments.com

   TA Instruments Inc.
   159 Lukens Drive
   New Castle, DE 19720  U.S.A.
   Tel: +1 302-427-4000
   FAX: +1 302-427-4001
   www.tainstruments.com

2. HAZARDS IDENTIFICATION

2.1 Classification:  Not classified as hazardous per GHS and OSHA.  Not dangerous according to the criteria set by the European Union (EU); not listed in Table 3.1 Annex VI of regulation 1272/2008/EU, as amended. The product is not hazardous in the form in which it is placed on the market and under the normal and recommended conditions of storage and use.

2.2 GHS Label Elements:  None required.

2.3 Other Hazards:  None identified.  The small quantities supplied in our products are unlikely to cause severe or immediate health effects.  Use only as directed and in accordance with safe laboratory practices.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

<table>
<thead>
<tr>
<th>CHEMICAL INGREDIENT NAME</th>
<th>CAS NUMBER</th>
<th>EC NUMBER</th>
<th>% by Weight</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>EU IOELV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adamantane</td>
<td>281-23-2</td>
<td>206-001-4</td>
<td>&gt;99</td>
<td>15 mg/m³ Total PNOR; 5 mg/m³ Respirable PNOR</td>
<td>10 mg/m³ Inhalable PNOS</td>
<td>NA</td>
</tr>
</tbody>
</table>

Notes: Product is provided as a vial containing 0.5 gram of adamantane crystals for use in calibration.  PNOR = Particulates Not Otherwise Regulated.  PNOS = Particulates Not Otherwise Specified.

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59). Exposure Limits are 8-Hour TWA. (Time Weighted Average) unless designated C (Ceiling) or STEL (Short Term Exposure Limit). Skin notation means compound can be absorbed through the skin.

4. FIRST AID MEASURES

4.1: Description of First Aid Measures:

   - Inhalation: Remove to fresh air.
   - Skin Contact: Flush with water.
   - Eye Contact: Immediately flush with water for a minimum of 15 minutes.
   - Ingestion: Get medical attention.

4.2: Most important symptoms and effects:  No important symptoms and effects.

4.3: Indication of any immediate medical attention or special treatment:  No special treatment required.  After following first aid measures, seek medical attention if desired.

5. FIRE-FIGHTING MEASURES

Flammable Properties: Combustible.

5.1 Extinguishing Media:  Dry chemical, carbon dioxide or appropriate foam.

5.2 Special hazards contributing to a fire:  No additional information available.

5.3 Advice for firefighters:  No additional information available.

Note:  As in any fire, wear self-contained breathing apparatus, and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:  Due to small quantities involved, spills or leaks should not pose a problem.  Use appropriate personal protective equipment.

6.2 Environmental precautions:  No additional information available.

6.3 Methods and material for containment and clean up:  Sweep up and place wastes into closed containers for proper disposal.

6.4 Reference to other sections:  For disposal see section 13.

7. HANDLING AND STORAGE

Handle as directed and in accordance with safe laboratory practices.

7.1 Precautions for safe handling:  No special precautions.

7.2 Conditions for safe storage:  No special conditions.

7.3 Specific end use:  For laboratory use only; for use only with TA instruments.  Not for drug, household or other uses.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:  Handle in accordance with safe laboratory practices.

8.2 Exposure controls:

   - Respiratory Protection:  Not normally needed.  If exposure limits are exceeded, use approved particulate respirator.
   - Eye Protection:  Safety glasses with side protection.
   - Skin Protection:  No special requirements.  Disposable nitrile gloves are acceptable for light intermittent exposure.
   - Engineering Controls:  No special requirements.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Beige crystalline powder

<table>
<thead>
<tr>
<th>Physical State: Solid</th>
<th>Flash Point: NA</th>
<th>Vapor Pressure: NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor: None</td>
<td>Explosion Limits: NA</td>
<td>Vapor Density (air=1): 4.7</td>
</tr>
<tr>
<td>pH: NA</td>
<td>Boiling Point: NA</td>
<td>Solubility in Water: Insoluble</td>
</tr>
<tr>
<td>Specific Gravity: 1.07</td>
<td>Melting Point: 516 - 518 °F (269 – 271 °C) (sublimates)</td>
<td>Other: NA</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

10.1 Reactivity: Hazardous Polymerization ☒Will Not Occur ☐May Occur
10.2 Stability: Stable.
10.3 Possibility of hazardous reactions: No data available.
10.4 Conditions and materials to avoid: Strong oxidizing agents.
10.5 Incompatible materials: Strong oxidizing agents.
10.6 Hazardous decomposition products: Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: May be irritating to eyes or skin. Oral, rat: LD50: >10gm/kg.
Skin corrosion/irritation: No data available.
Serious eye damage/irritation: No data available.
Respiratory or skin sensitization: No data available.
Carcinogenicity: No component of this product present at levels >=0.1% is classified as carcinogenic by OSHA, IARC (Group 1, 2A/2B), NTP (Group 1/2) or ACGIH.
Reproductive toxicity: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
Specific target organ toxicity (STOT) (single exposure): No data available.
STOT (repeated exposure): No data available.
Aspiration hazard: No data available.
Potential adverse human health effects and symptoms: Small amounts: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. Large amounts: Not applicable.

12. ECOLOGICAL INFORMATION

12.1 Toxicity: Small amounts: This product is not classified as environmentally hazardous.
   Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 0.285 mg/l - 96 h.
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: No data available.
12.6 Other adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods: Consult state, local or national regulations for proper disposal. The U.S. Environmental Protection Agency (EPA) does not classify unused product as hazardous waste.


14.1 UN number: Not applicable.
14.2 UN proper shipping name: Not applicable.
14.3 Transport hazard class: Not applicable.
14.4 Packing group Not applicable.
14.5 Environmental hazards: No additional information available.
14.6 Special precautions for user No additional information available.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the substance or mixture:
   15.1.1 EU-regulations: No REACH Annex XVII restrictions.
   15.1.2 National regulations:
      U.S. TOSCA: Listed.
      Canada: This product has been classified according to the hazard criteria of the Controlled Product Registration (CPR) and this SDS contains all the information required by the CPR.
   15.2 Chemical safety assessment: No additional information available.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>U.S. EPA</th>
<th>National Fire Protection Association Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA 313 Chemicals</td>
<td>CERCLA RQ</td>
</tr>
<tr>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
Notes, abbreviations and acronyms:
ACGIH: American Conference of Governmental Industrial Hygienists
DOT: U.S. Department of Transportation
CAS: Chemical Abstracts Service (division of the American Chemical Society)
EC: European Commission
EU IOELV: European Union Indicative Occupational Exposure Limit Values
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
IATA: International Air Transport Association
IMDG: International Maritime Code for Dangerous Goods
NA: Not Available.
OSHA: U.S. Occupational Safety and Health Administration

The information contained herein has been compiled from data presented in various technical sources believed to be accurate. TAI/Waters makes no warranties and assumes no liability in connection with the use of this information. It is the user’s responsibility to determine the suitability of this information and to assure the adoption of necessary precautions.

901167.001: February 15, 2016