1. **IDENTIFICATION**

1.1 Product Identifier: Aluminum Oxide  P/N: 960034.901, 900906.901, 270299.001  

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:  
   - 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  

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

1.5 Date: Rev L, March 2, 2016  

1.6 Supplier Information:  
   - EU: TA Instruments, A Division of Waters NV/SA  
   - ConneXion Business Park  
   - Brusselsesteenweg 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  

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. This product does not contain candidate substances of very high concern at a concentration >= 0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59).

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>Aluminum oxide</td>
<td>1344-28-1</td>
<td>215-691-6</td>
<td>&gt;99</td>
<td>15 mg/m³ Total PNOR 5 mg/m³ Respirable PNOR 10 mg/m³ Inhalable particles PNOS</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Product is provided in a vial containing 1.75 grams of aluminum oxide powder, for use as a spacer. PNOR: Particulates not otherwise regulated. PNOS: Particles Not Otherwise Specified.

Exposure Limits are 8-Hour TWA. (Time Weighted Average) unless designated C (Ceiling) or STEL (Short Term Exposure Limit).

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.

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**

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**

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 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: White powder
Physical State: Solid  Flash Point: NA  Vapor Pressure: 1 mm Hg at 2158 °C
Odor: None  Explosion Limits: NA  Vapor Density (air=1): NA
pH: NA  Boiling Point: 5396 °F (2977 °C)  Solubility in Water: Insoluble
Specific Gravity: 2.67 – 3.86 g/ml  Melting Point: 3762 °F (2050 °C)  Other: NA

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: Oxidizing agents, acids.
10.5 Incompatible materials: Small amounts: None under normal use. Large amounts: Not applicable.
10.6 Hazardous decomposition products: Aluminum oxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: No data available.
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), ACGIH or California.
Reproductive toxicity: This product does not contain any chemicals known to State of California to cause 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. Large amounts: Not applicable.
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>
<tr>
<td>4=Severe Hazard</td>
<td>3=Serious Hazard</td>
</tr>
<tr>
<td>2=Moderate Hazard</td>
<td>1=Slight Hazard</td>
</tr>
<tr>
<td>0=Minimal Hazard</td>
<td>2=Severe Hazard</td>
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</tbody>
</table>

Notes, abbreviations and acronyms:
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.

901152.001: March 2, 2016