Safety Data Sheet
Spray Dried Alumina Powder “Ready to Press” (RTP)

SECTION 1: Identification

Product identifier

Product name Spray Dried Alumina Powder (RTP)
Substance name Aluminum Oxide, Al₂O₃
Other names / synonyms Ready To Press Spray Dried Alumina (AL 74, AL 85, AL 94, AL 95, AL 96, AL 96P, AL 98, AL 98P, AL 995, AL 998, AL 9980, AL999)

Recommended use of the chemical and restrictions on use
For forming pressed compacts and fired ceramic components.

Supplier’s details

Name Superior Technical Ceramics
Address 600 Industrial Park Road
St. Albans, Vermont 05478
USA
Telephone 802-527-7726
Fax 802-527-1181

Emergency phone number(s)
802-527-7726

SECTION 2: Hazard identification

Classification of the substance or mixture
- Carcinogenicity (chapter 3.6), Cat. 1
- Specific target organ toxicity, repeated exposure (chapter 3.9), Cat. 1

GHS label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H335 May cause respiratory irritation
H350i May cause cancer by inhalation.
H372 Causes damage to organs through prolonged or repeated exposure

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/vapours/spray.
**SECTION 3: Composition/information on ingredients**

**Components**

1. **Aluminum oxide (Powder or Fiber)**
   - Concentration: 74 - 96.7%
   - Other names / synonyms: activated Alumina; alpha-Alumina; Alumina; Aluminum oxide; Aluminum oxide (fibrous forms); Aluminum oxide (Powder or Fiber); ALUMINUMOXIDE
   - CAS no.: 1344-28-1

2. **Silica, crystalline (airborne particles of respirable size)**
   - Concentration: 0.1 - 15% (Weight)
   - Other names / synonyms: Quartz; Sand; Silica, crystalline (airborne particles of respirable size); Silicon (IV) oxide
   - CAS no.: 14808-60-7
   - **H335**: May cause respiratory irritation
   - **H350i**: May cause cancer by inhalation.
   - **H372**: Causes damage to organs through prolonged or repeated exposure

3. **Organic Binders**
   - Concentration: 3 - 10%
   - Other names / synonyms: Organic Binders

4. **Secondary Oxides**
   - Concentration: 0.2 - 2.6%
   - Other names / synonyms: Secondary Oxides

**SECTION 4: First-aid measures**

**Description of necessary first-aid measures**

**General advice**
Organic portion may be combustible. Dust may cause irritation to eyes, nose, throat, and/or skin.
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If inhaled
Move to fresh air and consult with local medical personnel if discomfort persists.

In case of skin contact
Wash affected area with soap and water and consult with local medical personnel if irritation persists.

In case of eye contact
Flush with tepid water for a minimum of 15 minutes and consult with local medical personnel if discomfort persists.

If swallowed
Administer water to dilute, but not if person is unconscious. Consult with local medical personnel if discomfort persists.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Use any means suitable for extinguishing surrounding fire.

Specific hazards arising from the chemical
Possible Class A fire hazard – combustible vapors can develop in the headspace over the product. Flash point is 220ºC (428ºF).

Special protective actions for fire-fighters
Use protective clothing and breathing equipment appropriate for the surrounding fire and to protect against the aluminum oxide dust that may be dispersed in the air.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Ventilate area of leak or spill and wear appropriate personal protective equipment as specified. Sweep up any spills and place in containers for disposal or reclaim. Vacuuming or wet sweeping may be used to avoid excessive dust.

Methods and materials for containment and cleaning up
Any dust from machining should be wet mopped or dry vacuumed.

SECTION 7: Handling and storage

Precautions for safe handling
Store in a cool dry place. Any dust should be wet mopped.

SECTION 8: Exposure controls/personal protection

Control parameters

1. alpha-Alumina (CAS: 1344-28-1)
   PEL (Inhalation): see PNOR (Cal/OSHA)
   OSHA Annotated Table Z-1, www.osha.gov

2. alpha-Alumina (CAS: 1344-28-1)
   REL (Inhalation): See Appendix D (NIOSH)
   OSHA Annotated Table Z-1, www.osha.gov

3. alpha-Alumina, Total dust (CAS: 1344-28-1)
   PEL (Inhalation): 15 mg/m3 (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

4. alpha-Alumina, Total dust (CAS: 1344-28-1)
PEL (Inhalation): 10 mg/m³ (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

5. alpha-Alumina, Respirable fraction (CAS: 1344-28-1)
PEL (Inhalation): 5 mg/m³ (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

6. alpha-Alumina, Respirable fraction (CAS: 1344-28-1)
PEL (Inhalation): 5 mg/m³ (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

7. Silica, crystalline quartz, respirable dust (CAS: 14808-60-7)
PEL (Inhalation): See Annotated Z-3 ppm (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

8. Silica, crystalline quartz, respirable dust (CAS: 14808-60-7)
PEL (Inhalation): See Annotated Z-3 mg/m³ (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

9. Silica, crystalline quartz, respirable dust (CAS: 14808-60-7)
PEL (Inhalation): See Annotated Z-3 (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

10. Silica, crystalline quartz, respirable dust (CAS: 14808-60-7)
REL (Inhalation): See Annotated Z-3 (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

Appropriate engineering controls
Local or general exhaust ventilation recommended.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
Safety goggles in the presence of airborne dust.

Skin protection
Polymer gloves for prolonged dust exposure.

Respiratory protection
NIOSH/MSHA approved respirator for dust when exposure limit is exceeded.

Thermal hazards
CO and CO₂ in a fire and at temperatures >220°C (428°F).

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Appearance/form</td>
<td>White or Colored Flowable Powder</td>
</tr>
<tr>
<td>Odor</td>
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<tr>
<td>Odor threshold</td>
<td>N/A</td>
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<tr>
<td>pH</td>
<td>N/A</td>
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<tr>
<td>Melting point</td>
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</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

Chemical stability
Stable

Hazardous decomposition products
CO and CO2 in a fire and at temperatures >220ºC (428ºF).

SECTION 11: Toxicological information

Information on toxicological effects

Respiratory or skin sensitization
See Section 2.

Carcinogenicity
See Section 2

STOT-repeated exposure
See Section 2

SECTION 12: Ecological information

No Applicable Information Found

SECTION 13: Disposal considerations

Disposal of the product
This material is not hazardous per 40 CFR 261. Consultation with federal, state and local officials is recommended before disposal.

SECTION 14: Transport information

DOT (US)
Not dangerous goods
IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

US FEDERAL

TSCA
CAS# 1344-28-1 is listed on the TSCA inventory.
CAS# 14808-60-7 is listed on the TSCA inventory.

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

Section 313
CAS# 1344-28-1 is reported under Section 313.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

US STATE

CAS# 1344-28-1 can be found on the following state right to know lists:
Illinois, Minnesota, Massachusetts, New Jersey, Pennsylvania, Texas.

CAS# 14808-60-7 can be found on the following state right to know lists:
Massachusetts, Pennsylvania, Texas.
Consult your state and local resources for further information.

California Prop 65
Crystalline Silica (airborne particles of respirable size) is classified as a substance known to the state of California to be a carcinogen.

SECTION 16: Other information

Further information/disclaimer
Although reasonable care has been taken to provide accurate and current information in preparation of this document, Superior Technical Ceramics extends no warranties, makes no representation and assumes no responsibility for any loss, damage, or injury of any kind which may result from reliance of information provided in this document by any person.

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Prepared on: June 1, 2015
Last Revision: --