Section 1: Product and Company Identification
Product Name: PELCO® Activated Alumina Sorbent
Synonym: Alumina, Aluminum oxide.
Company Name
Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Section 2: Hazard Identification
Classification of the substance or mixture:
Not a hazardous substance or mixture
GHS Pictograms: NA
GHS Categories: NA
GHS Label elements, including precautionary statements
Not a hazardous substance or mixture.
Hazards not otherwise classified (HNOC) or not covered by GHS - none
Signal Word: NA

Health Effects:
NFPA Hazard Rating: Health: 0; Fire: 0; Reactivity: 0
HMIS® Hazard Rating: Health: 0; Fire: 0; Reactivity: 0
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment:
PBT: NA
vPvB: NA

Emergency overview
Appearance: Solid pellets, balls
Immediate effects:
Potential health effects
Primary Routes of entry: Ingestion
Signs and Symptoms of Overexposure: ND
Eyes: With pellets not likely to occur, unless contact with dust.
Skin: ND
Ingestion: May be harmful.
Inhalation: With pellets not likely to occur, unless with dust.
Chronic Exposure: ND
Chemical Listed As Carcinogen Or Potential Carcinogen: None.
See Toxicological Information (Section11)

Potential environmental effects
See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Principle Hazardous Component(s)</th>
<th>%</th>
<th>OSHA TWA mg/m³</th>
<th>ACGIH TLV mg/m³</th>
<th>NTP</th>
<th>IARC</th>
<th>OSHA regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum oxide (Al₂O₃), hydrate (1333-84-2) EC-No. : 215-691-6 Acute Tox. 4; H332</td>
<td>94-100</td>
<td>15*</td>
<td>10</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

H332 - Harmful if inhaled.
*USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

Section 4: First Aid Measures

If accidental overexposure is suspected
Eye(s) Contact: Flush eyes with water as a precaution
Skin Contact: Wash off with soap and plenty of water
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration.
Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water.

Note to physician
Treatment: ND
Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures

Flash Point: ND
Flammable Limits: ND
Auto-ignition point: ND
Fire Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special Fire Fighting Procedures: Special hazards arising from the substance or mixture: Aluminum oxide. Wear self-contained breathing apparatus for firefighting if necessary.
Further information: Do not use halocarbon extinguishers. The product itself does not burn.
Unusual Fire and Explosion Hazards: ND
Hazardous combustion products: ND
DOT Class: None

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Avoid dust formation. Sweep up and shovel. Keep in suitable, closed containers for disposal.
Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage

Precautions to be taken in Handling and Storage: Provide appropriate exhaust ventilation at places where dust is formed. Keep container tightly closed in a dry and well-ventilated place. Product is strongly hygroscopic
Storage temperature: No special requirements.
Storage Pressure: Can be stored under vacuum.

Section 8: Exposure Controls / Personal Protection

Engineering Controls
Ventilation required: Provide appropriate exhaust ventilation at places where dust is formed.
**Personal Protection Equipment**
Respiratory protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Protective gloves: Handle with gloves.
Skin protection: Wear appropriate protective clothing as required.
Eye protection: Wear goggles as required
Additional clothing and/or equipment: ND

**Exposure Guidelines**
See Composition/Information on Ingredients (Section 3)

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### Section 9 Physical and Chemical Properties
Appearance and Physical State: Solid
Odor (threshold): ND
Specific Gravity (H₂O=1): 4.000 g/cm³
Vapor Pressure (mm Hg): 1 hPa (1 mmHg) at 2,158 °C (3,916 °F)
Vapor Density (air=1): ND
Percent Volatile by volume: ND
Evaporation Rate (butyl acetate=1): ND
Boiling Point: 2,980 °C (5,396 °F)
Freezing point / melting point: 2,040 °C (3,704 °F)
 pH: 9.4 - 10.1 at 20 °C (68 °F)
Solubility in Water: Insoluble
Molecular Weight: 101.96 g/mol

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### Section 10: Stability and Reactivity
Stability: Stable under recommended storage conditions.
Conditions to Avoid: Exposure to moisture. Keep tightly sealed.
Materials to Avoid (Incompatibility): Strong acids, Strong bases, Chlorine trifluoride, Ethylene oxide, Halogenated hydrocarbon, Oxygen difluoride, Sodium nitrate, Vinyl compounds
Hazardous Decomposition Products: ND
Hazardous Polymerization: ND

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### Section 11: Toxicological Information
Results of component toxicity test performed: Acute toxicity: LD₅₀ Oral - Rat - > 10,000 mg/kg (OECD Test Guideline 401), LC₅₀ Inhalation - Rat - 4 h - > 2.6 mg/l (OECD Test Guideline 403)
Dermal: No data available
Skin corrosion/irritation: Skin – Rabbit: Result: No skin irritation (OECD Test Guideline 404)
Serious eye damage/eye irritation: Eyes – Rabbit, Result: No eye irritation (OECD Test Guideline 405)
Respiratory or skin sensitisation: Maximization Test (GPMT) - Guinea pig, Result: Did not cause sensitisation on laboratory animals.
Germ cell mutagenicity: No data available
Carcinogenicity:
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential 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: BD1200000
Human experience: Cough, chest pain, Difficulty in breathing, Gastrointestinal disturbance.
Liver - Irregularities Evidence - Based on Human Evidence
This product does not contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information
Ecological Information:
Toxicity: No toxicity at the limit of solubility
Persistence and degradability: The methods for determining biodegradability are not applicable to inorganic substances.
Bioaccumulative potential: Does not bioaccumulate.
Mobility in soil: No data available
Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects: No data available
Chemical Fate Information: ND

Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification: ND
Offer surplus and non-recyclable solutions to a licensed disposal company.
Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information
US DOT Information: Not dangerous goods
IATA: Not dangerous goods
IMDG: Not dangerous goods
Marine Pollutant: No
Canadian TDG: Not dangerous goods

Section 15: Regulatory Information
United States Federal Regulations
SARA: SARA hazard categories (EPCRA 311/312): Acute.
SARA 313: CAS Number, Chemical name; 1333-84-2 Aluminum oxide (Al2O3), hydrate
SARA Title III: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
RCRA: ND
TSCA: Released / listed
CERCLA: No

State Regulations
California Proposition 65: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

International Regulations
Canada WHMIS: ND
Europe EINECS Numbers: 215-691-6
Section 16: Other Information
Label Information: Avoid inhaling dust.
European Risk and Safety Phrases: ND
European symbols needed: ND
Canadian WHMIS Symbols:

Abbreviations used in this document
NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data

Disclaimer
Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.

SDS Form 0013F1V4