Material Safety Data Sheet

Product No. 16026 PELCO® High Performance Ceramic Adhesive
Issue Date (02-12-09)
Review Date (04-04-11)

Section 1: Product and Company Identification
Product Name: PELCO® High Performance Ceramic Adhesive
Synonym: None
Company Name
Ted Pella, Inc. and PELCO International, P.O. Box 492477, Redding, CA 96049-2477
Domestic Phone (800) 237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
International Phone (01) (530) 243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
Chemtrec Emergency Number 1-800-424-9300 24 hrs a day.

Section 2: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Principle Hazardous Component(s) (chemical and common name(s))</th>
<th>%</th>
<th>OSHA PEL 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(1344-28-1)</td>
<td>ND</td>
<td>15</td>
<td>10</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Silicate solution (1312-76-1)</td>
<td>ND</td>
<td>NE</td>
<td>NE</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

1) This product is a liquid mixture and all powders are encapsulated.
2) Exposure values shown for guidance only. Please follow applicable regulations.

Section 3: Hazard Identification
Emergency overview
Appearance: White, odorless, paste
Immediate effects: May cause moderate irritation to eyes, skin and digestive tract.
Potential health effects
Primary Routes of entry:
Signs and Symptoms of Overexposure:
Eyes: May cause moderate irritation to eyes.
Skin: May cause moderate irritation to skin.
Ingestion: May cause irritation to mouth, esophagus and stomach.
Inhalation: Mist may cause irritation to respiratory tract.
Chronic Exposure: None known
Chemical Listed As Carcinogen Or Potential Carcinogen: None
See Toxicological Information (Section11)
Potential environmental effects
See Ecological Information (Section 12)

Section 4: First Aid Measures
If accidental overexposure is suspected
Eye(s) Contact: Hold eyelids open and flush with water for at least 15 minutes. Seek medical attention. If physician is not immediately available, eye irrigation should continue for additional 15 minutes.
Skin Contact: Immediately wipe excess material off skin with dry cloth and then wash with plenty of soap and water for at least 5 minutes. Seek medical attention if irritation develops or persists. Remove contaminated clothing and shoes, and clean thoroughly before re-use.
Inhalation: Remove from immediate source of exposure and assure that victim is breathing. If not breathing, administer cardio-pulmonary resuscitation (CPR). If breathing is difficult, administer oxygen if available. Seek medical attention.
Ingestion: If swallowed, do not induce vomiting. If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek medical attention immediately. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

**Note to physician**

Treatment: ND
Medical Conditions generally Aggravated by Exposure: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

### Section 5: Fire Fighting Measures

Flash Point: NA
Flammable Limits: This material in non-combustible
Auto-ignition point: NA
Fire Extinguishing Media: This material is compatible with all extinguishing media.
Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved positive pressure breathing apparatus with full face piece and full chemical resistant protective clothing. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
Unusual Fire and Explosion Hazards: This material is non-combustible.
Hazardous combustion products: NA
DOT Class: The material is not a regulated hazardous material for transportation.

### Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots. Use NIOSH approved respirator where mist occurs. Mop up and neutralize liquid, then discharge to sewer in accordance with federal, state and local regulations or permits. Flush area with water to complete cleanup. Exercise caution during neutralization as heat may be generated.
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: Avoid contact with eyes, skin and clothing. Avoid breathing spray mist. Keep container closed. Promptly clean residue from closures with cloth dampened with water. Promptly clean up spills. Store in an area that is cool, dry, well ventilated, away from combustible material, and away from ignition sources. Keep containers closed. Store in clean plastic or stainless steel containers.
Storage temperature: Room temperature.
Storage Pressure: NA

### Section 8: Exposure Controls / Personal Protection

**Engineering Controls**
Ventilation required: Use with adequate ventilation. Keep containers closed. Safety shower and eyewash fountain should be within direct access.

**Personal Protection Equipment**

Respiratory protection: This product is not considered respirable in either the liquid or cured forms. However, if the cured product is polished, ground or chipped during processing, handling or use, powders may be released as airborne respirable particles. In these instances, appropriate personal protection equipment and local ventilation controls must be employed. If exposure limits are exceeded and local ventilation is unavailable, a supplied-air respirator or a self-contained NIOSH-approved dust and mist respirator is required.

Protective gloves: Wear protective gloves.

Skin protection: Wear body-covering protective clothing.

Eye protection: Wear chemical goggles.

**Exposure Guidelines**

See Composition/Information on Ingredients (Section 2)

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**Section 9 Physical and Chemical Properties**

Appearance and Physical State: Viscous white paste.

Odor (threshold): Odorless.

Specific Gravity ($H_2O=1$): 2.3

Vapor Pressure (mm Hg): ND

Vapor Density (air=1): ND

Percent Volatile by volume: ND

VOC Content, g/l: 0.00

Evaporation Rate (butyl acetate=1): ND

Boiling Point: ND

Freezing point / melting point: ND

pH: >11

Solubility in Water: Soluble

Molecular Weight: NA

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**Section 10: Stability and Reactivity**

Stability: This material is stable under all conditions of use and storage.

Conditions to Avoid: None

Materials to Avoid (Incompatibility): Gels and generates heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead, and zinc.

Hazardous Decomposition Products: None

Hazardous Polymerization: Will not occur.

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**Section 11: Toxicological Information**

Results of component toxicity test performed: NIF

Human experience: ND

This product **does or does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

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**Section 12: Ecological Information**

Ecological Information: Not tested

Chemical Fate Information: Sinks and mixes with water. Only water will evaporate from this material.
Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification: NIF
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: Proper shipping name: Not regulated.
IATA: Proper shipping name: Not regulated.
IMO: Proper shipping name: Not regulated.
Marine Pollutant: No
Canadian TDG: Not regulated.

Section 15: Regulatory Information
United States Federal Regulations
SARA: 311/312: Fire Hazard No, Reactivity Hazard No, Pressure Hazard No, Immediate Hazard Yes, Delayed Hazard No.
SARA Title III: 302, 304: This product does not contain any substances reportable under these sections.
RCRA: NIF
TSCA: All ingredients of this material are listed on the TSCA inventory.
CERCLA: No CERCLA reportable quantity has been established for this material.

State Regulations
California Proposition 65: None

International Regulations
International Inventory Status:
Canada (DSL) Yes
Europe (EINECS/ELINCS) Yes
Australia (AICS) Yes
Japan (MITI) Yes
South Korea (KECL) Yes
Canada WHMIS: ND
Europe EINECS Numbers: ND

Section 16: Other Information
Label Information: ND
European Risk and Safety Phrases: ND
European symbols needed: ND
Canadian WHMIS Symbols: ND
HMIS Hazard Rating: Health: 1; Flammability: 0; Reactivity: 0; Personal Protection: C.
NFPA Hazard Rating: Health: 1; Flammability: 0; Reactivity: 0.
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

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.

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