MATERIAL SAFETY DATA SHEET

Product: Ceramabond 890
Revision Date: 1/03/2012

1. MATERIAL IDENTIFICATION

Product Name: Ceramabond 890
Product Description: Blue-Grey, Odorless Paste
Product Use: High Temperature Adhesive/Coating System
Manufacturer: Aremco Products, Inc.
707-B Executive Blvd.
Valley Cottage, NY 10989
Telephone: 845-268-0039
Emergency Phone: 845-268-0039 or Infotrac (24/7) 800-535-5053

2. COMPOSITION

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>ACGIH TLV (mg/m³)</th>
<th>OSHA PEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Carbide (40.0-60.0%)</td>
<td>409-21-2</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Monoaluminum Phosphate (20.0-40.0%)</td>
<td>13530-50-2</td>
<td>2</td>
<td>N/E</td>
</tr>
<tr>
<td>Water (20.0-40.0%)</td>
<td>7732-18-5</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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

3. HAZARDS IDENTIFICATION

Emergency Overview: Blue-grey, odorless paste. Causes irritation to eyes, skin, and digestive tract.
Eye Contact: May cause eye irritation or burns.
Skin Contact: May cause irritation and burning of skin.
Inhalation Acute: Mists may cause irritation to upper respiratory track.
Ingestion Acute: May cause irritation to mouth, esophagus, and stomach.
Chronic Hazards: No known chronic hazards. Not listed on NTP, IARC or OSHA as carcinogen.
Physical Hazards: Spilled material is slippery and acidic.

HMIS: Health: 1
       Flammability: 0
       Reactivity: 0
       Personal Protection: C

4. FIRST AID MEASURES

Eye Exposure: Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention, preferably with an ophthalmologist. If a physician is not immediately available, eye irrigation should be continued for an additional 15 minutes.

Skin Exposure: Immediately wipe excess material off skin with a dry cloth then wash with plenty of soap and water for at least 5 minutes. See 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.

Medical Conditions Possibly 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.

5. FIRE FIGHTING MEASURES

Flash Point: Not applicable
Flammable Limits: This material is non-combustible.
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 Decomposition Materials: Oxides of phosphorous (under fire conditions).

6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Wear chemical goggles, body-covering protective clothing, chemical resistant gloves, and rubber boots. Use NIOSH approved respirator where mist occurs.
Spill Cleanup: 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.

7. HANDLING AND STORAGE

Handling: 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.
Storage: 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use with adequate ventilation. Keep containers closed. Safety shower and eyewash fountain should be within direct access.
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.
Skin Protection: Wear body-covering protective clothing and gloves.
Eye Protection: Wear chemical goggles.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical here represent typical properties of this product. Contact Technical Sales for exact specifications.

Appearance: Viscous Paste
Color: Blue-Grey
Odor: Odorless
pH: < 2.5
Specific Gravity, g/cc: 2.2
Water Solubility: Soluble
Melting Point Range: Not available
Boiling Point Range: Not available
Vapor Pressure: Not available
Vapor Density (air=1): Not available
VOC Content, g/l: 0.00
10. STABILITY AND REACTIVITY

Chemical Stability: This material is stable under all conditions of use and storage.
Conditions to Avoid: Acidic in nature and reacts with bases such as carbonates, oxides and hydroxides of alkali metals to form insoluble hydrates of aluminum phosphate.
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data: Not available
Chronic Toxicity Data: Not available

12. ECOLOGICAL INFORMATION

Ecotoxicity: Not tested
Environmental Fate: Not tested
Physical/Chemical: Sinks and mixes with water. Only water will evaporate from this material.

13. DISPOSAL CONSIDERATIONS

Disposal Method: Dispose in accordance with federal, state and local regulations and permits.

14. TRANSPORTATION INFORMATION

DOT/IATA
Proper Shipping Name: Corrosive Liquid, Acidic, Inorganic, N.O.S.
Technical Shipping Name: Aluminum Phosphate Solution
Hazard Class: 8
ID Number: UN3264
Packing Group: III
Labels: Corrosive

15. REGULATORY INFORMATION

U.S. Federal Regulations

CERCLA: No CERCLA reportable quantity has been established for this material.
TSCA: All ingredients of this material are listed on the TSCA inventory.
SARA Title III
Sections 302, 304, 313: This product does not contain any substances reportable under these sections.
Sections 311, 312:

<table>
<thead>
<tr>
<th>Hazard Classes</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactivity Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Immediate Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Delayed Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

International Inventory Status
Canada (DSL) Yes
Europe (EINECS/ELINCS) Yes
Australia (AICS) Yes
Japan (MITI) Yes
South Korea (KECL) Yes
### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA:</th>
<th>Health: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flammability: 0</td>
</tr>
<tr>
<td></td>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

#### Key Legend Information

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>ARD</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation &amp; Liability Act</td>
</tr>
<tr>
<td>DSL</td>
<td>Domestic Substance List</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Materials Identification System</td>
</tr>
<tr>
<td>ND</td>
<td>Not Determined</td>
</tr>
<tr>
<td>NE</td>
<td>Not Established</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Association</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety &amp; Health</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>RTECS</td>
<td>Registry of Toxic Effects of Chemical Substances</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments &amp; Reauthorization Act</td>
</tr>
<tr>
<td>SARA Title III</td>
<td>Emergency Planning &amp; Community Right to Know Act</td>
</tr>
<tr>
<td>SARA Section 302</td>
<td>Extremely Hazardous Substances</td>
</tr>
<tr>
<td>SARA Section 304</td>
<td>Emergency Release</td>
</tr>
<tr>
<td>SARA Section 311</td>
<td>MSDS/List of Chemicals &amp; Hazardous Inventory</td>
</tr>
<tr>
<td>SARA Section 312</td>
<td>Emergency &amp; Hazardous Inventory</td>
</tr>
<tr>
<td>SARA Section 313</td>
<td>Toxic Chemicals &amp; Release Reporting</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
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</tbody>
</table>

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