

MATERIAL SAFETY DATA SHEET

Product: Ceramacast 673-L Liquid
Revision Date: 2/12/2009

1. MATERIAL IDENTIFICATION

Product Name: Ceramacast 673-L Liquid

Product Description: Slightly Cloudy, Odorless Liquid
Product Use: High Temperature Potting Compound

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

Ingredient	CAS #	ACGIH TLV (mg/m ³)	OSHA PEL (mg/m ³)
Silicon Dioxide, Amorphous	7631-86-9	10	N/E
Magnesium Aluminum Silicate, Hydrated	12199-37-0	15	5
Ammonium Polymethacrylate	30875-88-8	N/E	N/E
Water	7732-18-5	N/A	N/A

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: Slightly cloudy, odorless liquid. May cause moderate irritation to eyes, skin, and digestive tract.

Eye Contact: May cause moderate irritation to the eyes.

Skin Contact: May cause moderate irritation to the 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. Dries to form a glassy film that can cut skin.

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.

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:	Liquid
Color:	Slightly Cloudy
Odor:	Odorless
pH:	8.5-9.5
Specific Gravity, g/cc	1.20
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: None.
Materials to Avoid: None.
Hazardous Decomposition Products: None.
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: 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 UN Status: The material is not a regulated hazardous material for transportation.

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:

<u>Hazard Classes</u>	<u>Yes/No</u>
Fire Hazard	No
Reactivity Hazard	No
Pressure Hazard	No
Immediate Hazard	Yes
Delayed Hazard	No

<u>International Inventory</u>	<u>Status</u>
Canada (DSL)	Yes
Europe (EINECS/ELINCS)	Yes
Australia (AICS)	Yes
Japan (MITI)	Yes
South Korea (KECL)	Yes

16. OTHER INFORMATION

NFPA: Health: 1
Flammability: 0
Reactivity: 0

Key Legend Information

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

Disclaimer: The information contained herein is based on data taken from sources believed to be both current and reliable at the time of publication. Aremco Products, Inc. makes no warranty, expressed or implied, as to the accuracy of this MSDS and assumes no liability arising from its use by others. Compliance with all applicable Federal, State and Local laws and regulations remains the responsibility of the user.

MATERIAL SAFETY DATA SHEET

Product: Ceramacast 673-P Powder
Revision Date: 2/12/2009

1. MATERIAL IDENTIFICATION

Product Name: Ceramacast 673-P Powder
Product Description: Blue-Grey Odorless Powder
Product Use: High Temperature Adhesive/Potting Compound
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

Ingredient	CAS #	ACGIH TLV (mg/m ³)	OSHA PEL (mg/m ³)
Calcium Aluminate	12046-68-1	10	10
Silicon Carbide	409-21-2	10	15
Titanium Dioxide	13463-67-7	10	10

Notes:

1) Exposure values shown for guidance only. Please follow applicable regulations.

3. HAZARDS IDENTIFICATION

Emergency Overview: Blue-grey, odorless powder. May cause moderate irritation to eyes, skin, and digestive tract.
Eye Contact: May cause abrasion to the eyes.
Skin Contact: May cause moderate irritation to the skin.
Inhalation Acute: Airborne dust 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.

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

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: Not applicable.
Special Fire Fighting Procedures: Not applicable.
Unusual Fire and Explosion Hazards: This material is non-combustible.

6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Wear goggles, protective clothing, and chemical resistant gloves. Use NIOSH approved dust respirator to prevent inhalation of dust.
Spill Cleanup: Collect material with precaution against breathing dust and dispose in accordance with federal, state and local regulations.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid breathing dust. 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, and well ventilated. Store in clean, closed plastic or metal containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use with adequate ventilation; mechanical dust collector is recommended. Keep containers closed. Safety shower and eyewash fountain should be within direct access.
Respiratory Protection: If exposure limits are exceeded and local ventilation is unavailable, a supplied-air respirator or a self-contained NIOSH-approved particulate cartridge respirator is recommended.
Skin Protection: Wear 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: Powder
Color: Blue-Grey
Odor: Odorless
Specific Gravity, g/cc 2.5 (Powder + 20% 673-L Liquid Mix)
Water Solubility: ~10% Soluble
Melting Point: ~2000 °C
Boiling Point Range: Not applicable
Vapor Pressure: None
Vapor Density (air=1): None

10. STABILITY AND REACTIVITY

Chemical Stability: This material is stable under all conditions of use and storage.
Conditions to Avoid: Keep exposure to dust levels below TLV. Avoid rapid heating of the cement that may cause spalling or eruption of the cement because of rapid hydration.
Materials to Avoid: Reacts with water to hydrate as part of the cement reaction.
Hazardous Decomposition Products: Water of hydration will be released as steam above 250 °C.
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 UN Status: The material is not a regulated hazardous material for transportation.

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, 31:

<u>Hazard Classes</u>	<u>Yes/No</u>
Fire Hazard	No
Reactivity Hazard	No
Pressure Hazard	No
Immediate Hazard	Yes
Delayed Hazard	No

<u>International Inventory</u>	<u>Status</u>
Canada (DSL)	Yes
Europe (EINECS/ELINCS)	Yes
Australia (AICS)	Yes
Japan (MITI)	Yes
South Korea (KECL)	Yes

16. OTHER INFORMATION

NFPA:

Health:	1
Flammability:	0
Reactivity:	0

Key Legend Information

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

Disclaimer: The information contained herein is based on data taken from sources believed to be both current and reliable at the time of publication. Arengo Products, Inc. makes no warranty, expressed or implied, as to the accuracy of this MSDS and assumes no liability arising from its use by others. Compliance with all applicable Federal, State and Local laws and regulations remains the responsibility of the user.