

MATERIAL SAFETY DATA SHEET

Section 1. Product and Company Information

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SUPERSEDES MSDS DATED: March 21, 2007

PRODUCT NAME: CeRam-Grout GC



Section 2. Composition and Ingredient Information

Common Name	Chemical Name	CAS Number	Weight %
PART-A CeRam-Grout GC (Base)			
Ceramic Filler	Ceramic Filler	14807-96-6 1344-28-1	50 - 60
*Proprietary #1	Epoxy Resin	28064-14-4	30 - 40
PART-B CeRam-Grout GC (Curing Agent)			
Modified Aliphatic Polyamine	*Trade Secret	N/A	2 to 3**
Diethylenetriamine Mixture	N-(2-Aminoethyl)-1,2-Ethanediamine	111-40-0	2 to 3**
Bisphenol A	4,4'-(1-Methylethylidene) Bisphenol	80-05-7	2 to 3**

*The specific chemical identity of this ingredient is declared proprietary information under 29 CFR 1910.1200, section (i) Trade Secret. Hazard information is provided in this MSDS for this ingredient.

**This percentage is from a fully catalyzed mix. The ratio is 8 parts A (Base) to 1 part B (Curing Agent). This ratio is from a catalyzed mix of CeRam-Grout GC.

Section 3. Physical Data

Description	CeRam-Grout GC (Catalyzed)	PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
Boiling Point	N/A	N/A	> 392°F (200°C)
Vapor Density (Air = 1)	>Air	>Air	>Air
Solubility in Water	Insoluble	Insoluble	Miscible
Viscosity (centapoise)	>200,000	>200,000	3,000 to 5,000
pH	Slightly Alkaline	Slightly Acidic	Alkaline
Appearance and odor	Gray Paste, aromatic odor	Lt Gray Paste, aromatic odor	White, amine odor
Percent Solids by Volume	100.0	100.0	100.0
Density – packaged (on average)	1.61	1.68	1.07
Percent Volatiles by weight	0.0	0.0	0.0
Non-Volatiles	100.0	100.0	100.0

Section 4. Fire Fighting Measures

Description	CeRam-Grout GC (catalyzed) and/or PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
Flashpoint	Greater than 200°F (93.3°C)	> 200°F (93.3°C)
Auto Ignition Temperature	No data	N/A
Extinguishing Media	Water fog, CO ₂ , or dry chemical	Foam, CO ₂ , or dry chemical. A water spray can also be used.
Unusual Fire and Explosion Hazards	No special fire hazards are known to be associated with this product.	Decomposition and combustion products may be toxic.
Fire Fighting Instructions	Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.	Use self contained breathing apparatus.
Hazardous Combustion Products	May form: Carbon dioxide and carbon monoxide, various hydrocarbons.	Carbon monoxide, carbon dioxide, aldehydes, and nitrogen oxides.

Section 5. Reactivity Data

Description	CeRam-Grout GC (catalyzed) and/or PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
Stability	Stable	Stable
Incompatibility	Strong oxidizing agents	Avoid strong oxidizing agents, acids, copper and its alloys.
Hazardous Decomposition Products	May form: carbon dioxide and carbon monoxide, and aldehydes.	Carbon monoxide, carbon dioxide, aldehydes, and nitrogen oxides.
Hazardous Polymerization	Product will not undergo hazardous polymerization.	Will not occur.

Section 6. First Aid Measures

Description	CeRam-Grout GC (catalyzed) and/or PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
Inhalation	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.	Remove to fresh air. Give oxygen if breathing is difficult.
Eyes	Flush with running water for at least 15 minutes. Seek medical attention.	Immediately flush eyes with water for at least 15 minutes. Get immediate medical assistance.
Skin	Wash with flowing water. Remove contaminated clothing and launder before re-wearing. If irritation persists, seek medical attention.	Promptly wash thoroughly with mild soap and water.
Ingestion	DO NOT induce vomiting. Seek medical attention.	DO NOT induce vomiting. Seek medical attention.

Section 7. Health and Safety

	CeRam-Grout GC (catalyzed) and/or PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
Primary Routes of Exposure	Inhalation, skin, eye	Dermal
Potential Health Effects	<p>Eye: Exposure may cause mild eye irritation. Symptoms may include stinging, tearing, and redness.</p> <p>Skin: Exposure causes skin irritation. Symptoms may include: allergic skin reaction.</p> <p>Swallowing: Single does oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful</p> <p>Inhalation: Exposure to vapor or mist is possible.</p> <p>Target Organ Effects: Overexposure to this material has been suggested as a cause of the following effects in humans, and may aggravate pre-existing disorders of these organs: skin sensitization.</p>	<p>Overexposure effects: Direct or prolonged skin or eye contact can cause skin and eye burns.</p> <p>Swallowing liquid can burn mouth and cause nausea, vomiting, diarrhea, abdominal pain and collapse. Can cause allergic skin and respiratory reactions after repetitive exposure. Animal studies on component(s) have shown effects on liver and fetus.</p>
Medical Conditions Aggravated by Exposure	Persons with a history of chronic respiratory disease, skin disease, or central nervous system disorders may be at increase risk for worsening their conditions from exposure to this product.	Persons with a history of allergic conditions may be at increased risk for worsening their conditions from exposure to this product.
Symptoms of Exposure	Gastrointestinal irritation (nausea, vomiting, diarrhea), irritation (nose, throat, respiratory tract).	Gastrointestinal irritation (nausea, vomiting, diarrhea), irritation (nose, throat, respiratory tract).

Section 8. Exposure Controls and Personal Protection

INGREDIENT	OSHA PEL (8-HR TWA)	ACGIH TLV (8-HR TWA)
*Proprietary #1	Not established	Not established
Ceramic Filler	2 mg/m ³	2 mg/m ³
Modified Aliphatic Polyamine	None established	None established
Diethylenetriamine Mixture	1 PPM	1 PPM (skin)
Bisphenol A	5 mg / m ³ (respirable fraction) 15 mg / m ³ (total fraction)	10 mg / m ³

Section 9. Regulatory Information

Description	PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
TSCA Status	Each ingredient is on the inventory	Chemical components listed on inventory
SARA Title III	Sec 302: None Sec 313: None	Sec 313: 4,4'-Isopropylidenediphenol

Section 10. Engineering Controls and Personal Protection

Description	CeRam-Grout GC (catalyzed) and/or PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
Engineering Controls	General dilution ventilation and/or exhaust ventilation should be provided as necessary to maintain exposures below regulatory limits.	Good general mechanical ventilation is recommended. Local exhaust recommended.
Respiratory Protection	If irritation occurs, or if the TLV or PEL is exceeded, use a NIOSH/MSHA approved air purifying respirator with organic vapor cartridges or canisters, or supplied air respirators. Use respiratory protection in accordance with your company's respiratory program, local regulations or OSHA regulations under 29 CFR 1910.134.	Organic chemical cartridge respirator, if needed.
Dermal Protection	Loose fitting long sleeved shirt, long pants and chemical resistant gloves such as neoprene or natural rubber gloves.	Wear impervious rubber gloves.
Eye Protection	Chemical protective goggles.	Splash-proof chemical goggles.

Section 11. Spills, Leaks and Disposal

Description	CeRam-Grout GC (catalyzed) and/or PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
Land Spill	Small Spill: Absorb paste on vermiculite, floor absorbent or other absorbent material. Large Spill: Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank.	Avoid all personal contact. Take up with absorbent material. Shovel into closeable containers. Flush contaminated area with water.
Water Spill	No data	This product is miscible in water. That means it is totally dissolved when mixed with water. Due to this property, this is considered a marine pollutant; however, when mixed with part A, and after the product cures, it is totally inert.
Air Release	No data	This product reacts with air by absorbing the moisture out of the air. Take up with absorbent material. Shovel into closeable containers. Flush contaminated area with water.
Disposal Considerations	Dispose of in accordance with all applicable local, state, and federal regulations.	Not a hazardous waste under RCRA (40 CFR 261).

Section 12. Transport Information

Description	PART-A: CeRam-Grout GC (Base)	PART-B: CeRam-Grout GC (Curing Agent)
DOT/IATA/IMDG Shipping Names	Not regulated	Amines, Liquid, Corrosive, N.O.S., (Diethylenetriamine Mixture)
Hazard Class or Division	N/A	8
Secondary	None	None
UN Identification Number	N/A	UN 2735
Packing Group	N/A	III
Label(s) required	N/A	Corrosive (8)
Quantity Limitations(Air only)		
 Passenger Aircraft	N/A	5 liter (5 quarts)
 Cargo Aircraft	N/A	60 liters (15 gallons)
Packing Instructions		
 Passenger Aircraft	N/A	818
 Cargo Aircraft	N/A	820