

PRODUCT BULLETIN

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**ALLIED
MINERAL**
PRODUCTS, INC.

CAST 217FS-FINE

General Information

CAST 217FS-FINE is a high strength, low cement, fused silica castable which exhibits excellent resistance to thermal shock. It can be used for encasing induction coils where severe thermal shock resistance is required. CAST 217FS-FINE is also well suited for lining channel furnace inductors holding zinc and galvalume alloys. CAST 217FS-FINE contains more fused silica than CAST 405S for improved thermal shock resistance. This product offers the following features and benefits:

- > Durable in thermal cycling conditions
- > Good flow under vibration
- > High purity fused silica grains

Technical Data

Chemical Analysis (Major Components)		
SiO ₂	76.0%	Material Required 1.81 g/cm ³ (113 lb/ft ³)
Al ₂ O ₃	20.5%	Grain Size 2 mm (10 mesh) and finer
CaO	3.5%	Maximum Temperature 1315°C (2400°F)
		Installation Method Casting/Vibrator
		Procedures G-33

Packaged in 20 kg (45 lb.) multi-wall paper bags. This product is also available in bulk packaging. Storage beyond 24 months is not recommended. Store in a dry location to avoid moisture pickup.

Hydraulic Set

Water Required:	13.2 -13.6%
Wet Mixing Time:	5 minutes
Working Time:	up to 45 minutes
Initial Set:	2 – 8 hours
Final Set:	4 – 14 hours

Allied Mineral Products, Inc. supplies an entire line of monolithic refractories for the metals industry. For more information or a complete evaluation of your refractory requirements, please contact your local Allied representative.

Warning: Contains aluminum oxide, fused silica, calcium aluminate cement, and silica. The International Agency for Research on Cancer (IARC) has classified crystalline silica inhaled in the form of quartz or cristobalite carcinogenic to humans. Refer to Material Safety Data Sheet for additional information and disposal instructions. Hydrogen gas may be generated when product is exposed to water. Proper ventilation should be supplied to avoid gas buildup. Avoid use of enclosed forms. Ignition of hydrogen gas in an enclosed area can lead to personal injury. Avoid breathing dust. Wear NIOSH approved respirator during installation, removal, and disposal of product to prevent inhalation of dust. Avoid contact with skin and eyes. Cement powder or freshly mixed castable may cause eye and skin irritation. Steam spalling, which can lead to personal injury, may result from improper drying and firing procedures for products that are installed wet. In case of eye contact, flush immediately and repeatedly with water and consult a physician. For safest use and optimum performance, proper practices must be followed.

(C217FINE)
8/11/15

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Laboratory Test Bar Data

CAST 217FS-FINE

<u>Permanent Linear Change</u>	<u>%</u>
After heating to:	
760°C (1400°F)	-0.06
982°C (1800°F)	-0.16
1148°C (2100°F)	-0.19

<u>Density</u>	<u>g/cm³</u>	<u>kg/m³</u>	<u>pcf</u>
After heating to:			
760°C (1400°F)	1.79	1790	111.9
982°C (1800°F)	1.77	1770	111.0
1148°C (2100°F)	1.79	1790	111.6

<u>Modulus of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
After heating to:			
760°C (1400°F)	3.7	37.7	535
982°C (1800°F)	4.0	40.8	575
1148°C (2100°F)	3.3	33.4	475

<u>Modulus of Rupture</u>	<u>MPa</u>	<u>kg/cm²</u>	<u>psi</u>
After heating to:			
760°C (1400°F)	20.7	210.9	3000
982°C (1800°F)	21.4	217.9	3100
1148°C (2100°F)	15.2	154.6	2200



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