

# STACKCRETE® 608

VIBRATION CAST, SELF-FLOW, PUMP CAST, SHOTCRETE

## General Information

Stackcrete® 608 is a robust mullite based mix with a SiC addition that is well suited for severe service applications requiring excellent abrasion resistance, resistance to damage from thermal shock, resistance to alkali attack and other corrosive environments. This product is suited for the upper section of blast furnace stacks and industrial preheat stack sections where SiC nonwetting properties are needed to provide increased resistance to iron scale or build up.

## Chemical Analysis

Al <sub>2</sub> O <sub>3</sub>	59.3%	Maximum Use Temperature	1650°C (3000°F)
SiO <sub>2</sub>	28.3%	Material Required Vibration Cast	2.60 g/cm <sup>3</sup> (162 lb/ft <sup>3</sup> )
SiC	7.9%	Material Required For Shotcreting	2.47 g/cm <sup>3</sup> (154 lb/ft <sup>3</sup> )
CaO	1.8%	Grain Size	5 mm (4 mesh) and finer
TiO <sub>2</sub>	1.7%	Installation Methods	Vibration Cast, Self-Flow, Pump Cast, Shotcrete
Fe <sub>2</sub> O <sub>3</sub>	0.8%	Standard Packaging	25 kg (55 lb) multi-wall paper bags
Alkalies	0.1%	Standard Palletizing	107cm X 107cm (42" X 42") pallets - 64 bags per pallet (1600 kg / 3520 lb)
MgO	0.1%	Note:	Bulk bags available upon request

## VIBRATION CAST DATA

Temperature		Density		Linear Expansion <sup>†</sup>	MOR		CCS		HMOR		Porosity	K-factor*		Abrasion Resistance
°C	°F	g/cm <sup>3</sup>	lb/ft <sup>3</sup>	%	MPa	psi	MPa	psi	MPa	psi	%	W·m <sup>-1</sup> ·K <sup>-1</sup>	BTU·in ft <sup>2</sup> ·hr·°F	cm <sup>3</sup>
110	230	2.61	163	-	22.0	3200	179.1	26000	-	-	8	2.06	14.30	6 - 8
815	1500	2.60	162	-0.25	32.4	4700	206.7	30000	37.2	5400	10	2.18	15.10	4 - 6
1100	2000	2.64	165	-0.34	31.7	4600	248.0	36000	-	-	10	2.12	14.70	3 - 6
1400	2550	2.61	163	-0.04	24.1	3500	248.0	36000	-	-	10	2.09	14.50	3 - 6
1500	2732	2.55	159	1.20	32.4	4700	144.7	21000	-	-	10	-	-	-
1600	2910	2.40	150	2.27	26.9	3900	137.8	20000	-	-	12	-	-	-

<sup>†</sup> Permanent Linear Expansion

\*Estimated

## SHOTCRETE DATA

Temperature		Density		Linear Expansion <sup>†</sup>	MOR		CCS		HMOR		Porosity	K-factor*		Abrasion Resistance
°C	°F	g/cm <sup>3</sup>	lb/ft <sup>3</sup>	%	MPa	psi	MPa	psi	MPa	psi	%	W·m <sup>-1</sup> ·K <sup>-1</sup>	BTU·in ft <sup>2</sup> ·hr·°F	cm <sup>3</sup>
110	230	2.53	158	-	14.5	2100	72.3	10500	-	-	14	1.96	13.60	7 - 9
815	1500	2.52	157	-0.31	16.5	2400	71.7	10400	-	-	18	1.95	13.50	5 - 7
1100	2000	2.53	158	-0.30	15.2	2200	77.9	11300	-	-	17	1.95	13.50	-
1400	2550	2.53	158	0.30	22.7	3300	91.3	13250	-	-	19	1.95	13.50	4 - 6
1500	2732	2.47	154	1.47	21.4	3100	97.8	14200	-	-	20	-	-	-
1600	2910	-	-	-	-	-	-	-	-	-	-	-	-	-

<sup>†</sup> Permanent Linear Expansion

\*Estimated

## SET TIMES AND WATER REQUIREMENTS

	Vibration	Shotcrete
Water Required	4.5-5.6%	5.5- 6.75%
Working Time	1 - 4 hr	4 hours minimum
Initial Set	2 - 6 hr	5 - 12 hr
Final Set	3 - 12 hr	6 - 18 hr

Allied Mineral Products, Inc. supplies a complete line of monolithic refractories for industrial applications. For more information or a complete evaluation of your refractory requirements, please contact your local Allied representative.

Warning: Contains silicon carbide, aluminum oxide, aluminosilicates, 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. 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.

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