

# TUFF-FLO 608

VIBRATION CAST, SELF-FLOW, PUMP CAST

## General Information

TUFF-FLO 608 is a robust, mullite-based low-cement castable with a SiC addition. It 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 will perform well in molten copper processing operations, cement preheaters and coolers, boilers, incinerators and agglomerator preheat sections by providing increased resistance to iron scale build-up.

## Chemical Analysis

		Maximum Use Temperature	1650°C (3000°F)
Al <sub>2</sub> O <sub>3</sub>	60.7%	Material Required Vibration Cast	2.60 g/cm <sup>3</sup> (162 lb/ft <sup>3</sup> )
SiO <sub>2</sub>	27.3%	Material Required For Pump Cast	2.47 g/cm <sup>3</sup> (154 lb/ft <sup>3</sup> )
SiC	7.4%	Grain Size	5 mm (4 mesh) and finer
CaO	1.5%	Installation Methods	Vibration Cast, Self-Flow, Pump Cast
TiO <sub>2</sub>	1.7%	Standard Packaging	25 kg (55 lb) multi-wall paper bags
Fe <sub>2</sub> O <sub>3</sub>	0.8%	Note:	Bulk bags available upon request
Alkalies	0.2%		
MgO	0.1%		

## 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>	
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

## SET TIMES AND WATER REQUIREMENTS

	External Vibration	Internal Vibration	Pump/Cast	Self-Flow
Water Required	4.0 - 4.8%	4.2 - 5.0%	5.0 - 6.0%	5.5 - 6.5%
Working Time	2 - 4 hr	2 - 4 hr	4 hr minimum	n/a
Initial Set	4 - 8 hr	4 - 8 hr	5 - 10 hr	6 - 12 hr
Final Set	5 - 10 hr	5 - 10 hr	6 - 12 hr	7 - 14 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.

(TUFF608)  
1/16/15  
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