



ARTECH TECHNOLOGIES INC  
Superior Abrasion Resistant Materials

**ACTCHEM<sup>®</sup> FS**

**PRODUCT DATA**

**Actchem<sup>®</sup> FS** is a single component, fused silica based, air setting castable with very good abrasion resistance and low thermal expansion which can be hand packed, rammed, or gunned in thin lining applications. The formulation is based on the original Actchem, using the same proven binder system. The binder system provides flexible water additions, early strength, and low abrasion loss at low temperatures.

**Actchem<sup>®</sup> FS** has a unique bonding system that allows working times of 60-90 minutes. Enhanced workability and non-slumping features achieve greater installation productivity. Excellent adhesion properties make the product ideal for patch repairs.

**Actchem<sup>®</sup> FS** can be gunned using standard gunning equipment and needle valve water control.

<b>Service Temperature</b>	2000°F	<b>Water Required</b>	6.5 to 7%
<b>Abrasion Loss (ASTM C-704)</b>	≤ 10 cc	<b>Material Required</b>	130 lb/ft <sup>3</sup>

**Coefficient of Reversible Thermal Expansion** 0.65 x 10<sup>-6</sup> in./in./°F (1.2 x 10<sup>-6</sup> cm/cm/°C)

**Thermal Conductivity**

Mean Temp	Btu*in/(h*ft <sup>2</sup> *°F)	W/(mK)
500°F	5.5	0.79
1000°F	5.8	0.84
1500°F	6.0	0.87

**Physical Properties**

Test Temperature (°F)	Bulk Density (pcf)	Cold Crushing Strength (psi)	Modulus of Rupture (psi)	Permanent Linear Change (%)
Ambient	130	6,000	1,000	Nil
230	126	> 8,000	2,000	0.0 to -0.1
1500	123	> 10,000	3,000	-0.0 to -0.3

**Chemical Analysis**

Al <sub>2</sub> O <sub>3</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	TiO <sub>2</sub>	CaO	P <sub>2</sub> O <sub>5</sub>	Alkalies
14.3	80.3	0.1	0.1	3.1	1.3	0.8

**Packaging: 45 lb. bags at 72 per pallet**

The data shown represents typical results obtained by testing using ASTM or other acceptable procedures as required. They are subject to normal manufacturing variations and can not be used for specification purposes. Artech Technologies, Inc. assumes no liability for the use of this data and provides no warranty expressed or otherwise for its accuracy.