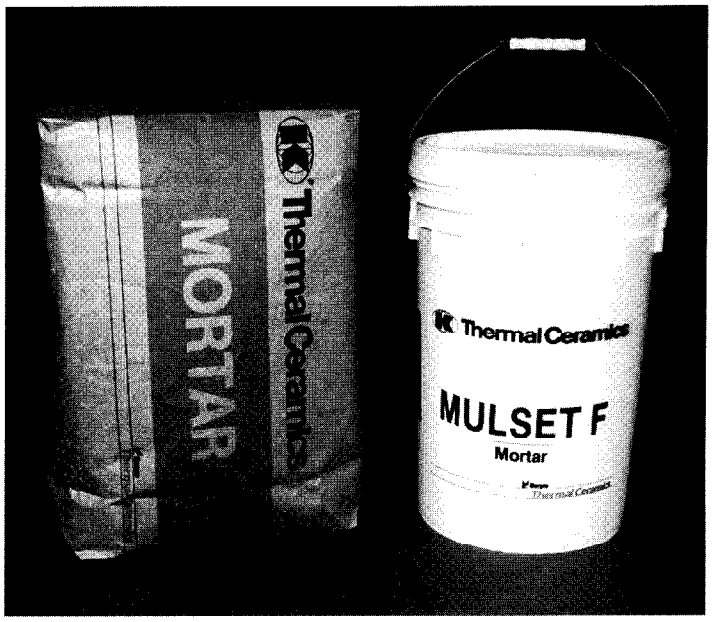
MORTARS

- Matched for use with each Thermal Ceramics firebrick and insulating firebrick
- Both heat-setting and air-setting grades are available
- Temperature use limits range from 2850°F to 3200°F

Thermal Ceramics refractory mortars were developed to match Thermal Ceramics dense and insulating firebricks in various thermal, chemical, and physical service conditions. Available in wet and dry grades, Thermal Ceramics mortars will provide the convenience you want with the performance you need for practically every high-temperature refractory application. K®-Bond Mortar has an extra smooth, creamy consistency plus excellent tackiness to brick surfaces.



Mortar series	High temp (heat-setting)	Mul-Set® F (wet) (air-setting)	Mul-Set F (dry) (air-setting)	K®-Bond (wet) (air-setting)	K-Bond (dry) (air-setting)	Air-Set™ (wet) (air-setting)	Air-Set (dry) (air-setting)	Smoothset® (wet) (air-setting)	Smoothset (dry) (air-setting)
Maximum service temperature, °F	3000	3200	3200	3000	3000	3000	3000	2850	2900
Type of brick	IFB (K-20, 23, 25) (K-26LI, 28, 30) firebrick	IFB (K-3000) firebrick	IFB (K-3000) firebrick	IFB (K-20, 23, 25) (K-26LI, 28, 30) firebrick	IFB (K-20, 23, 25) (K-26LI, 28, 30) firebrick	IFB (K-26LI, 28, 30) firebrick	IFB (K-26LI, 28, 30) firebrick	IFB (K-20, 23, 25) (K-26LI, 28, 30) firebrick	IFB (K-20, 23, 25) (K-26LI, 28, 30) firebrick
Quantities required lbs/1000 brick[1]	220 - 250 240 - 300 240 - 300	300 - 350 300 - 350	180 - 300 180 - 300	300 - 360 320 - 380 320 - 380	220 - 280 240 - 300 240 - 300	360 - 400 360 - 400	275 - 300 275 - 300	220 - 270 220 - 330 260 - 280	160 - 180 190 - 240 190 - 240
Lbs required to brush coat 100 sq ft	20	22	20	22	20	22	20	22	20
Average recommended water, %									
trowel	26	–	22	–	20	–	31	–	29
dip	44	–	33	–	37	–	52	–	50
Pounds per bag	50	75 (drum)	50	75	50	75 (drum)	50	75 (drum)	50

[1]Amount of mortar used for layering either insulating firebrick or firebrick varies according to masonry practice. A range of quantities is shown for the rows of brick types listed above.

Chemical Analysis

% (Fired Basis)

Mortar series		High Temp (heat-setting)	Mul-Set® F (wet) (air-setting)	Mul-Set F (dry) (air-setting)	K®-Bond (wet) (air-setting)	K-Bond (dry) (air-setting)	Air-Set™ (wet) (air-setting)	Air-Set (dry) (air-setting)	Smoothset® (wet) (air-setting)	Smoothset (dry) (air-setting)
Alumina	Al_2O_3	45	66	66	47	47	41	40	36	38
Silica	SiO_2	50	28	27	47	48	53	53	57	56
Ferric oxide	Fe_2O_3	1	1.2	1.2	0.9	0.9	1.4	1.4	0.9	1
Titanium oxide	TiO_2	2.2	2.2	2.2	0.7	1.1	2	1.9	1.7	1.9
Calcium oxide	CaO	0.2	0.1	0.1	0.1	0.5	0.2	0.2	0.2	0.2
Magnesium oxide	MgO	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.1	0.1
Alkalies as	Na_2O	0.6	2.2	3.2	4.3	2.1	2.1	3.7	4	2.8
Boron oxide	B_2O_3	0.7	–	–	–	–	–	–	–	–