

Mortars

Datasheet Code US: 1-14-5

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Features

- Matched for use with each Thermal Ceramics firebrick and insulating firebrick
- Both heat setting and air setting grades are available
- Temperature use limits up to 3200°F (1760°C)

Product Description

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, mortars will provide the convenience you want with the performance you need for practically every high temperature refractory application.

Smoothset™ is a lower cost, tacky, 2800°F (1538°C) mortar. Excellent for built-up shapes.

Airset™ is a tacky 3000°F (1649°C) mortar excellent for built-up shapes of IFB or super duty Firebricks.

Airset 3000 EG is a lower cost 3000°F (1649°C) mortar with dipping consistency.

K-Bond™ mortar is an extra smooth and creamy consistency. It is good for mortaring IFB and Firebrick linings.

Mul-Set™ F is a high alumina mortar suited for high temperature IFB linings.

Coastal 90™ and Coastal 90 AS™ are a wet and dry version of extra high alumina mortar. They are ideal for 90% alumina brick constructions.

The values given herein are typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Morgan Advanced Materials office to obtain current information.

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	<u>High-Temp</u>	<u>Smoothset Wet</u>	<u>Smoothset Dry</u>	<u>Air-Set Wet</u>	<u>Air-Set Dry</u>	<u>Air-Set 3000 EG Wet</u>
Properties						
Manufacturing location	US	US	US	US	US	US
Material Class	Crystalline Silica	Crystalline Silica	Crystalline Silica	Crystalline Silica	Crystalline Silica	Crystalline Silica
Material Grade	Dry, heat setting	Wet, air setting	Dry, heat setting	Wet, air setting	Dry, heat setting	Wet, air setting
Classification Temperature, in normal oxidizing conditions, °C (°F)	1649 (3000)	1566 (2850)	1593 (2900)	1649 (3000)	1649 (3000)	1649 (3000)
Quantity required kg/1000 bricks NF1 size (lb/1000 bricks)	98-113 (220-250)	-	-	180 (397)	140 (308)	113-145 (250-320)
Shelf life, months	12	3-6	12	6-12	12	6-9
Brick type recommended use	IFB	IFB	IFB	IFB	IFB	IFB
Water %, recommended						
trowel	26	-	29	-	31	-
dip	44	-	50	-	52	-
Chemical Analysis, % weight basis after firing						
Alumina, Al ₂ O ₃	45	36	38	41	40	44
Silica, SiO ₂	50	57	58	53	53	50
Ferric Oxide, Fe ₂ O ₃	1.3	0.9	1	1.4	1.4	0.8
Titanium Oxide, TiO ₂	2.2	1.7	1.9	2	1.9	1.9
Calcium Oxide + Magnesium Oxide, CaO + MgO	0.3	0.3	0.3	0.3	0.3	0.2
Alkalies as Na ₂ O and K ₂ O	0.6	4	2.8	2.1	3.7	2.6

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	<u>K-Bond Wet</u>	<u>K-Bond Dry</u>	<u>Mul-Set F Wet</u>	<u>Mul-Set F Dry</u>	<u>Coastal 90</u>	<u>Coastal 90 AS</u>
Properties						
Manufacturing location	US	US	US	US	US	US
Material Class	Crystalline Silica	Crystalline Silica	Crystalline Silica	Crystalline Silica	Crystalline Silica	Crystalline Silica
Material Grade	Wet, air setting	Dry, heat setting	Wet, air setting	Dry, heat setting	Wet, air setting	Dry, heat setting
Classification Temperature, in normal oxidizing conditions, °C (°F)	1649 (3000)	1649 (3000)	1760 (3200)	1760 (3200)	1788 (3250)	1816 (3300)
Quantity required kg/1000 bricks NF1 size (lb/1000 bricks)	160 (353)	130 (286)	160 (353)	140 (308)	109-145 (240-320)	204-249 (450-550)
Shelf life, months	9-12	12	6-12	12	6-12	12
Brick type recommended use	IFB	IFB	IFB	IFB	Firebrick	Firebrick
Water %, recommended						
trowel	-	20	-	22	-	23
dip	-	33	-	37	-	45
Chemical Analysis, % weight basis after firing						
Alumina, Al ₂ O ₃	47	47	66	66	88	88
Silica, SiO ₂	47	48	28	24	9	9
Ferric Oxide, Fe ₂ O ₃	0.9	0.9	1.2	1.2	0.3	0.2
Titanium Oxide, TiO ₂	0.7	1.1	2.2	2.2	0.3	0.1
Calcium Oxide + Magnesium Oxide, CaO + MgO	0.2	0.9	0.2	0.2	0.1	0.1
Alkalies as Na ₂ O and K ₂ O	4.3	2.1	2.2	3.2	2.2	2.2

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