

Kaowool® Moldables



Product Description

Kaowool Moldables are composed of ceramic fibers, organic polymers, inorganic binders, and other proprietary ingredients. They are pliable, low shrinkage, putty like material that is supplied wet and premixed, ready for installation. They have been specially formulated to provide a smooth texture and enhanced flowability. These properties allow successful application in thin sections and through a caulking apparatus.

Kaowool Moldable AR is specially formulated to provide a very strong and hard material that is non-wetting to molten aluminum. It is an ideal material for use in troughs and launders.

Features

- Pliable, putty-like materials
- Installation ready
- Suited for use as a high temperature caulking, sealing, and finishing product

Applications

- Molten aluminum launders
- Refractory burner blocks
- Fibrous patching /back-up material
- Recommended for protecting alloy studs and fasteners in ceramic fiber furnace linings

Product Availability

- 1 gallon pail
- 5 gallon pail
- 11 oz. caulking tube
- 32 oz. caulking tube

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Physical Properties

	Moldable	Moldable AR
Continuous temperature use limit, °F (°C)	1900 (1038)	1800 (982)
Maximum temperature rating, °F (°C)	2000 (1093)	1800 (982)
Density, pcf, (kg/m ³)		
wet, as received	70-75 (1122-1202)	100-105 (1602-1683)
dried @ 230°F (110°C)	28-30 (448-480)	55-60 (881-962)
Compressive strength, psi (Mpa), 5% deformation		
@ 230°F (110°C)	-	300 (2.07)
@ 1000°F (538°C)	-	300 (2.07)
@ 1500°F (816°C)	-	300 (2.07)
@ 1800°F (982°C)	-	300 (2.07)
Modulus of rupture, psi (Mpa)		
@ 230°F (110°C)	-	438 (3.02)
@ 1000° (538°C)	-	434 (2.99)
@ 1500°F (816°C)	-	442 (3.05)
@ 1800°F (982°C)	-	465 (3.21)
Permanent linear change, %		
@ 230°F (110°C)	-	-1.0
@ 500°F (260°C)	-	-1.5
@ 1000°F (538°C)	-0.1	-2.3
@ 1500°F (816°C)	-0.2	-2.3
@ 1800°F (982°C)	-	-3.1
@ 2000°F (1093°C)	-2.7	-
Shelf Life, months	6	6

Chemical Analysis, % weight based after firing

Alumina, Al ₂ O ₃	26-30	29-32
Silica, SiO ₂	67-72	64-67
Others	1-2	3-5

Thermal Conductivity, BTU•in./hr•ft²•°F (w/m•k) ASTM C 417

Mean temperature @ 500°F (260°C)	0.5	0.7
@ 1000°F (538°C)	0.7	1.0
@ 1500°F (816°C)	1.0	1.3

Aluminum Resistant Cup test

707.5 alloy, 1500°F (816°C), 72 hours	-	no penetration
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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 Thermal Ceramics office to obtain current information.