

## Kaowool® Moldables

Datasheet Code US: 5-14-1010

### 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

- Reheat Furnaces
- Forge Furnaces
- Heat-treating
- Annealing furnaces
- Kilns

### Aluminum Resistant Cup test

707.5 alloy, 1500°F (816°C), 72 hours no penetration

### Availability

<u>Products</u>	<u>1 gallon pail</u>	<u>5 gallon pail</u>	<u>11 oz caulking tube</u>	<u>32 oz caulking tuber</u>
Kaowool Moldable	X	X	X	X
Kaowool Moldable AR	X	X	X	X

<u>Mastics Product Name</u>	<u>Kaowool Moldable</u>	<u>Kaowool Moldable AR</u>
Fiber Class	RCF	RCF
Material Grade	Moldable	Moldable
<u>Physical Properties</u>		
Color	light brown	light brown
Continuous Use Temperature, °F	1900	1800
Continuous Use Temperature, °C	1038	982
Classification Temperature, °F	2000	1800
Classification Temperature, °C	1093	982
Density, dried @ 230°F, pcf	28-30	55-60
Denisty, dried @ 110°C, kg/m <sup>3</sup>	448-480	881-962
Density, wet, pcf	70-75	100-105
Denisty, wet, kg/m <sup>3</sup>	1121-1201	1602-1683
Shelf life, months	12	6

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. This product may be covered by one or more patents or foreign equivalents: A list of patent numbers is available upon request to Morgan Advance Materials plc.

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<b>Mastics Product Name</b>	<b>Kaowool Moldable</b>	<b>Kaowool Moldable AR</b>
<b>Aluminum Resistant cup test</b>		
1500°F (816°C), 707.5 alloy, 72 hours	No penetration	No penetration
<b>Modulus of Rupture, MOR, dried, psi</b>		
230°F	-	438
1000°F	-	434
1500°F	-	442
1800°F	-	465
<b>Modulus of Rupture, MOR, dried, MPa</b>		
110°C	-	3.02
538°C	-	2.99
816°C	-	3.05
982°C	-	3.21
<b>Compressive strength @ 5% deformation, dried, psi</b>		
230°F	-	300
1000°F	-	300
1500°F	-	300
1800°F	-	300
<b>Compressive strength @ 5% deformation, dried, MPa</b>		
110°C	-	2.07
538°C	-	2.07
816°C	-	2.07
982°C	-	2.07
<b>Permanent Linear Shrinkage, %, 24 hours</b>		
230°F (110°C)	-	-1
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	-
<b>Chemical Analysis, % weight basis after firing</b>		
Alumina, Al <sub>2</sub> O <sub>3</sub>	26-30	29-32
Silica, SiO <sub>2</sub>	67-72	64-67
Other	1-2	3-5
<b>Thermal Conductivity, BTU·in/hr·ft<sup>2</sup>, per ASTM C201</b>		
500°F	0.5	0.7
1000°F	0.7	1
1500°F	1	1.3
<b>Thermal Conductivity, W/m·K, per ASTM C201</b>		
260°C	0.07	1
538°C	0.1	0.14
816°C	0.14	0.19

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