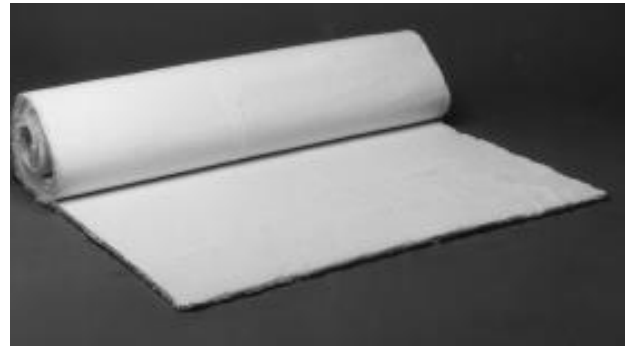

ALUMINA MOLDABLE BLANKET RS-A Moldable

ZIRCAR's Refractory Sheet Type RS-A Moldable is a tough ceramic fiber reinforced insulation which contains no asbestos. Developed for induction coil liners and molten metal transport, Refractory Sheet Type RS-A Moldable is ideally suited for a wide range of high temperature, high thermal shock applications. It is also used for brazing separators and fixtures for jewelry making, as well as a high temperature gasket material. Its high Alumina (Al_2O_3) content makes it resistant to sticking in many environments, including molten metals, and it has a maximum operating temperature of **1450°C (2642°F)**. Refractory Sheet Type RS-A Moldable is a wet blanket that can be easily formed into a wide variety of simple and complex shapes. Drying results in a strong rigid shape that can be re-wet to restore the original moldability. Baking irreversibly removes the moldability, leaving Refractory Sheet Type RS-A Moldable rigid and unaffected by moisture. Refractory Sheet Type RS-A Moldable can be frozen and thawed repeatedly with no loss in moldability or other properties. Refractory Sheet Type RS-A Moldable can be dried rapidly, either with a torch or by applying directly to a hot furnace, to make quick repairs of cracks, or to replace missing refractories.



Standard roll of Refractory Sheet Type RS-A Moldable.

SUGGESTED APPLICATIONS

- Induction furnace components such as channel melter components, coil liners, coreless induction components, splash and coil shields
- Brazing separators and fixtures for jewelry making as well as other industrial applications
- High temperature gasketing material
- Non-ferrous metal handling and transport as spouts, troughs, and casting tips

FORMING INSTRUCTIONS FOR RS-A MOLDABLE

To Make a Flat Board:

1. Open plastic covering and unroll the desired amount of Refractory Sheet Type RS-A Moldable.
2. Cut to size with a knife.
3. Dry on a rigid glass, wood, or metal plate separated by a piece of plastic, cloth or paper.
4. Prevent warping by either restraining or flipping over to allow drying from both sides.

To Make a Cylinder:

1. Select a smooth mandrel of the desired size and shape.
2. Wrap mandrel with a plastic sheet.
3. Cut enough RS-A Moldable off roll to make desired shape.
4. Cut a bevel on the leading edge of the RS-A Moldable with a knife.
5. Wrap RS-A Moldable around the mandrel.
6. Work joints together with a tool, such as a screw driver or knife to achieve as much fiber to fiber interlocking as possible.

To Make Complex Shapes:

1. Make a plaster mold with sufficient draft to allow for the removal of the formed part.
2. Form RS-A Moldable onto or into mold by hand.
3. Dry until firm, then remove from mold and complete drying
4. Large complex shapes can be made on any sort of removable form by joining sheets together with a screwdriver or knife to achieve as much fiber to fiber interlocking as possible

ZIRCAR Refractory Composites, Inc.

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ALUMINA MOLDABLE BLANKETS

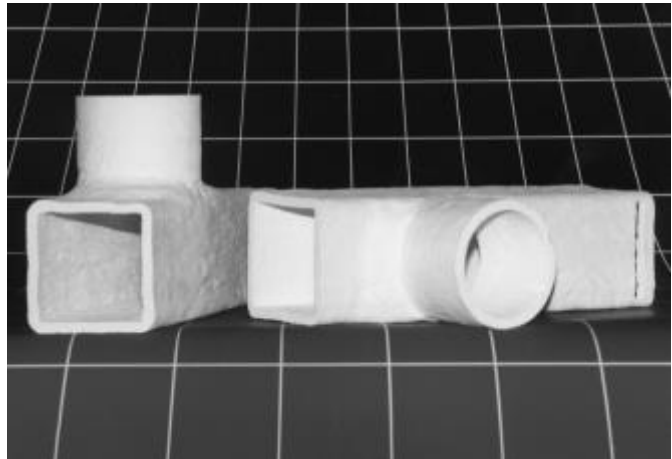
ZIRCAR Type RS-A is also available as prefabricated parts made to customer specifications. These parts are available in 3 varieties:

Type RS-A1 is dried to a constant weight at 100°C (212°F). This product can be remoistened to impart moldability. It is ideal for use as high temperature die cut gaskets.

Type RS-A2 is fired for 3 hours at 600°C (1112°F) and fully cured. It is unaffected by moisture and is remains permanently rigid.

Type RS-A3 is fired, hardened with ZIRCAR AL-Hard at 5% pickup, and refired. This treatment increases RS-A3 density and strength. These products have the same technical properties of dried RS-A Moldable except where listed below.

Our manufacturing process allows a wide range of forms to be made. Please contact ZIRCAR with your requirements.



Custom furnace components made using Refractory Sheet Type RS-A Moldable.

PHYSICAL PROPERTIES AND CHARACTERISTICS

TYPE	RS-A1	RS-A2	RS-A3
Typical Composition, %			
Al ₂ O ₃	90	90	90
SiO ₂	10	10	10
Other Oxides	0	0	0
Density, gm/cm ³ (lb/ft ³)	1.6(100)	1.6(100)	1.7(105)
Porosity, %	40	40	38
Modulus of Rupture, ** MPa(psi)	3.4(500)	3.9(560)	9.1(1330)
Compressive Strength, ** MPa(psi) at 10% deflection	6.9(1000)	9.7(1400)	17.2(2500)
Hardness, Durometer "D"	50	55	70
Pullout Strength (lbs on #10 sheet metal screws)	30	50	90
Moisture Content, %	10	2	2
Linear Shrinkage [‡] , 16 hrs soak at 1200°C(2192°F)	4	0	0
Thermal Conductivity**, W/m K(BTU/hr. ft °F/in)			
500°C (932°F)	0.53(3.8)	0.53(3.8)	0.53(3.8)

** Properties expressed parallel to thickness.

‡ Properties expressed perpendicular to thickness.

AVAILABILITY

Item #	Description
KS11	RS-A MOLDABLE, 24" X 72" X 1/2"
KS12	RS-A MOLDABLE, 48" X 96" X 1/2"
KS13	RS-A MOLDABLE, 24" X 36" X 1/2"

Note: These products can be further processed to provide finished sizes. Processes such as slitting, cutting, die punching and CNC machining are available upon request. Larger sizes are available.

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