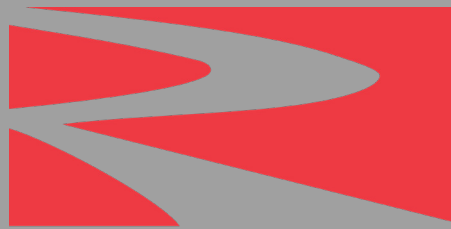


# Alumina Brick

(All Applications)



**RESCO**<sup>®</sup>  
PRODUCTS, INC.

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# Alumina Brick

## EXTRA HIGH ALUMINA BRICK

### *Rescal 90 XD*

These unique 90+% alumina brick are made from high purity alumina with a mullite matrix. They are characterized by high resistance to slag attack, low porosity, low permeability, high hot strength and density, resistance to severe abrasion and excellent dimensional stability. These mullite bonded 90% alumina refractories are used in sulfur recovery units (SRU) channel induction furnaces, chemical waste incinerators, and other high temperature furnaces.

### *Rescal 10 CR • Rescal 10 CR SR*

These brick are alumina-chrome bonded 90% alumina brick. These brick are truly solid solution-bonded brick: the matrix consists of a solid solution of chromic oxide and alumina which results in extra hot load resistance and ability to withstand high temperature chemical attack. The silica-free bonding system and neutral chemistry offer excellent resistance to erosion corrosion from iron oxide-silica rich slags. **Rescal 10CR and 10 CR SR** can be used in severe corrosion areas of channel type induction furnaces and any other application where load-bearing and corrosion resistance are critical factors. They are recommended for the slag line of steel furnaces, carbon black reactors and incinerators. The CR SR brands are the spall resistant products of the alumina-chrome family

RESCAL

PATRIOT HF

SENECA

ALUMEX

KRIAL

LADLEMAX

DURALITE

DURATAB

PATRIOT

## SUPER DUTY FIRECLAY BRICK

### *Patriot*

The outstanding properties of super duty fireclay brick are high refractoriness, strength, and high temperature volume stability and low thermal conductivity. This product is a 47% alumina brick.

### *Patriot HF*

Similar chemistry to PATRIOT, but with a higher firing temperature to provide resistance to carbon monoxide gas disintegration, low porosity, and hot load bearing characteristics.

## HIGH ALUMINA BRICK FOR ALUMINUM CONTACT

### *Rescal 80 BP (Burned) • Rescal 80PA (Unburned) • Rescal 85BP (Burned)*

These products are ideal choices for molten aluminum contact in melting and holding furnaces. They perform well in aluminum furnaces with high mechanical wear and abuse. They are bauxite-based, burned 80%-85% alumina brick with superior hot and cold strengths. Their non-wetting matrix and high strengths make either an ideal choice for melting or holding furnaces, especially those utilizing heavy cold charges.

# Alumina Brick

## GENERAL PURPOSE ALUMINA BRICK

### **Rescal BB**

This product is a low duty fireclay backup brick for electrolytic cells in an aluminum production. This is a resale product.

### **Rescal 70D**

This general purpose, bauxite-based 70% alumina brick feature an extraordinary degree of corrosion and thermal shock resistance. They are ideally suited where cost effectiveness is essential. **Applications:** This brick is used to line iron and steel ladles, EAF furnaces, mineral processing units, and non-ferrous furnaces. This general purpose brick is NOT recommended for CO atmospheres, high temperature alkali environments, or load bearing applications.

### **DuraLite 70G • DuraLite 80G**

DuraLite 70G and 80G are bauxite based brick made with higher purity and more refractory raw materials than general purpose 70% and 80% alumina brick, respectively. They can be used in all applications where general purpose 70% and 80% alumina brick would normally be recommended, but operating conditions require and upgrade.

### **Seneca 80**

This general purpose 80% alumina, bauxite-based brick are used as economical upgrades over the general purpose 80% alumina brick.

### **R 80 B**

This bauxite-based brick is made with higher purity and more refractory raw materials than general purpose 80% alumina brick.

## PHOSPHATE-BONDED ALUMINA BRICK

This complete line of high alumina brick in the range of 60% to 85% alumina is phosphate-bonded to give optimum strength burned brick. Along with the development of unusually high strength, these phosphate-bonded brick have low porosity, with excellent resistance to abrasion, erosion, and alkali attack.

### **Seneca 60 P**

This product is a phosphate-bonded, mullite-based brick with excellent alkali resistance. It is not recommended for load bearing or in reducing atmospheres.

### **Alumex P-7 • Alumex P-8**

These are phosphate-bonded with high strength and load-bearing ability, low porosity and modulus of elasticity, and excellent resistance to abrasion, erosion and mechanical abuse. They are recommended for: skid rail tile in billet heating furnaces; hearths subject to severe abrasion; foundry ladles; cupola troughs, and are widely used at either end of cement kiln hot zones and in nose rings, because their low modulus of elasticity gives the products excellent resistance to torsional stresses created by rotation of the kiln. Alumex P-8 brick are more refractory and stronger than the Alumex P-7.

### **Krial CFB**

This product is a low iron, high strength 70% alumina brick designed for resistance to impact, abrasion, and carbon monoxide (CO) attack, severe wear blast furnace, circulating fluidized bed, and DRI applications.

### **Alumex P-85HS**

This product exhibits a combination of very high strengths, high abrasion resistance, and excellent thermal shock resistance. Its high purity composition yields a refractory product that can withstand severe alkali attack. It is recommended for use in electric furnace roofs, rotary cement kilns, reheat furnace skid rails and other furnace applications where erosion and abrasion from slag and metal are severe at high temperature. Alumex P-85 HS ceramic anchors will be made and stocked at East Canton.

# Alumina Brick

## HIGH ALUMINA BRICK-ALKALI & CREEP RESISTANT

The alkali and creep resistant Krial brick are high purity, low alkali products based on high purity aluminas, and high grade andalusite. Designed originally for use in blast furnaces and blast furnace stoves due to their low creep rate and carbon monoxide resistance, several of these products have also flourished in other markets including glass furnace regenerators and carbon anode baking furnaces. All of the brands listed in this category give an "A" rating in the ASTM carbon monoxide (CO) disintegration test.

### **Krial 50-A**

This product is a combination of creep resistance, dimensional stability, resistance to chemical attack and thermal conductivity which make it ideally suited for heat exchange applications. Its high purity micro-structure with a low glass content and a high amount of mullite is extremely creep and spall resistant. It can withstand higher operating temperatures than typical low flux super duty brick. **Applications:** It is an ideal product for the use in high efficiency; thin-walled blast furnace stove checkers. It is also an excellent choice for all areas of carbon anode baking furnaces where its refractoriness and superior mechanical properties are essential. Its matrix mineralogy is very resistant to the destructive silica depletion caused by fluorine attack. Krial 50-A offers the baking pit operator the opportunity to improve productivity by significantly raising firing temperatures and reducing cycle times.

### **Krial 60**

This product is a low alkali, low porosity brick with outstanding hot strength. Its superior resistance to thermal shock, abrasion and alkali attack help make it the cost effective solution for a variety of severe applications. **Applications:** blast furnace stack linings and is highly recommended for use in torpedo ladles, chemical and waste incinerators and as tie brick in carbon anode baking furnaces.

### **Krial 60-A+**

This product is the primary answer for blast furnace and blast furnace stove applications requiring a low flux 60% alumina product. It is a low porosity, high strength product and has become the choice for most thin wall stove checker applications. It has been quite successful in blast furnace stack linings and torpedo ladles.

### **Krial 50CM**

KRIAL® 50 is a low alkali ladle brick that has provided outstanding service. It has excellent strengths, low porosity, and desirable expansion behavior. KRIAL® 50 continues to be an excellent choice for sidewalls and bottoms in milder ladle environments and for safety linings where more refractory linings are necessary.

## RESIN-BONDED ALUMINA-CARBON BRICK

### **LadleMax BSC •LadleMax ASC**

These products are resin-bonded alumina-carbon brick with silicon carbide designed for hot metal car and iron charging ladle service. BSC is a bauxite-based, iron-friendly refractory typically used in low wear area of the vessel sidewalls and bottoms. ASC contains fused alumina and is used in the iron charging ladles and hot metal cars, in applications such as tap stream impact pads or stir quadrants.

### **LadleMax AMG •LadleMax AMG SL**

**LadleMax AMG** is an 80% alumina brick containing magnesia, antioxidants, and graphite. At steelmaking temperatures the mix ingredients react to form various carbon and magnesia-spinel phases. These reactions are expansive and provide a brick lining which appears monolithic. This product is recommended for ladle bottoms and barrels of steel shops making aluminum-killed steels. **LadleMax AMG SL** is similar to **AMG** but contains a higher quantity of magnesia for improved slag resistance.

### **LadleMax AMG HP**

This product is an 80% alumina brick containing a blend of refractory grade alumina plus magnesia, antioxidants, and graphite. At steelmaking temperatures, these mix ingredients react to form various carbon and magnesia-alumina spinel phases. **AMG HP** is suggest for steel ladle bottoms and barrels when a 10% and 25% life improvement is needed over regular **AMG**. This product has a higher purity composition than **LadleMax AMG** (higher alumina and less silica, lime and iron oxide.)

### **LadleMax AMG 90 •LadleMax AMG 90 SL •LadleMax AMG 95**

**LadleMax AMG 90** is similar to regular **AMG**, but it contains fused alumina; the alumina content is 90%. It was developed for severe operating conditions associated with tap stream impact and buffer zones between lower quality ladle barrel brick and Magnesia-Carbon slaglines. **LadleMax AMG 90** is typically zoned with other **AMG** compositions to provide a balanced wear pattern to achieve maximum heat life. **LadleMax AMG 90 SL** is similar to **AMG 90**, but contains a higher quantity of magnesia for improved slag resistance. **LadleMax AMG 95** is similar to **AMG 90** with improved chemistry. This product has shown wear rate improvement of 20-25% above **AMG 90**.

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Edited 2019



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