

RESCAL 80PA

FURNAL HS

RESCAL 80BP

LO-SIL SUPER



**BRICK
FURNACES
FOR THE
ALUMINUM
INDUSTRY**

AN AMERICAN-OWNED
REFRACTORY COMPANY





Bricking Furnaces

After all of the recent mergers, acquisitions, and financial problems in the refractory industry, RESCO Products is one of the few companies still manufacturing brick.

Bricking an aluminum furnace requires skilled bricklayers. However, with the proper quality refractory brick and a team of skilled bricklayers you can have a long lasting and low maintenance furnace, and we offer Resco for the Long Run.

Advantages

1. Completely fired in properties.
2. Sufficient joints to absorb the thermal and mechanical stresses.

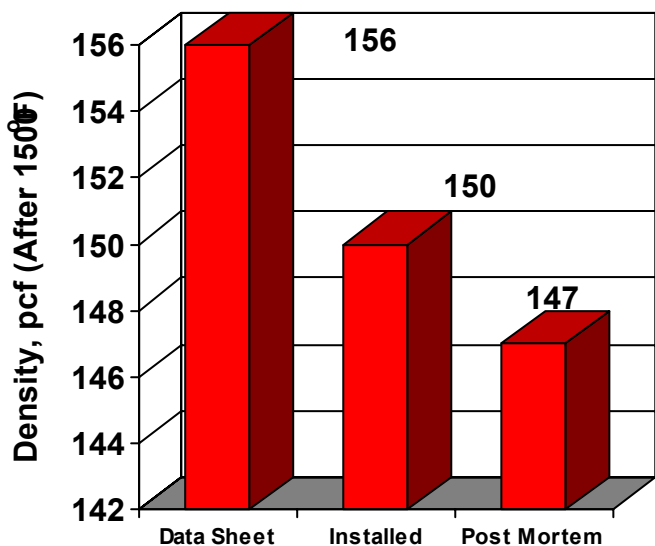
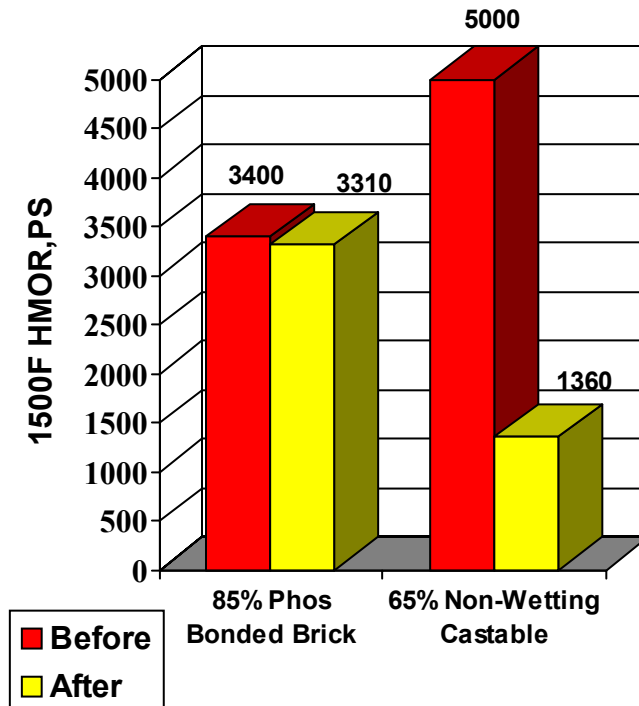
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Resco for the long run



Brick Vs. Castable

To the right is a bar chart that depicts an industry standard brick and castable showing their change in 1500° F hot modulus of rupture strength after years in service in an aluminum furnace. The typical 85% alumina phos-bonded brick loses virtually no strength during service. However, the high strength 65% alumina non-wetting castable loses 73% of its strength during service. The castable starts off with superior hot strength, but due to thermal, mechanical, and chemical reactions taking place in the castable these features decrease strength over time.



To the left is a bar chart of measured densities for a 60% alumina, non-wetting, low-cement castable taken at different times. The first two samples were prefired to 1500° F. The chart shows the decline in density when you compare values of products produced in the lab versus field-installed material and to the post mortem sample taken from the “spent” furnace lining.

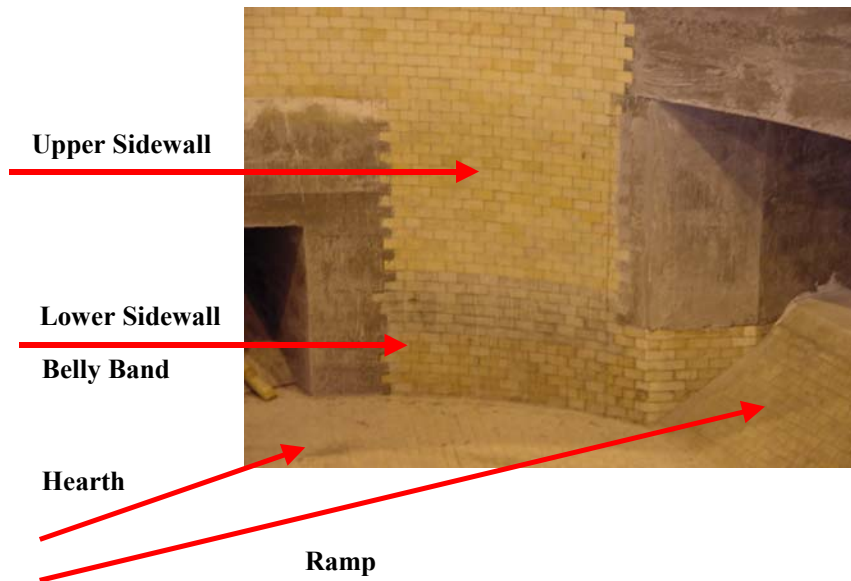
Installers must possess experience and skill to install today’s high technology castables to achieve their maximum properties and benefits. Brick linings require skill, too, but the properties of the product are not dependant on the installer or on conditions surrounding the site.

Product Recommendation

Alumex 70-E, Alumex 70-HS,
Seneca 60, Seneca 60P

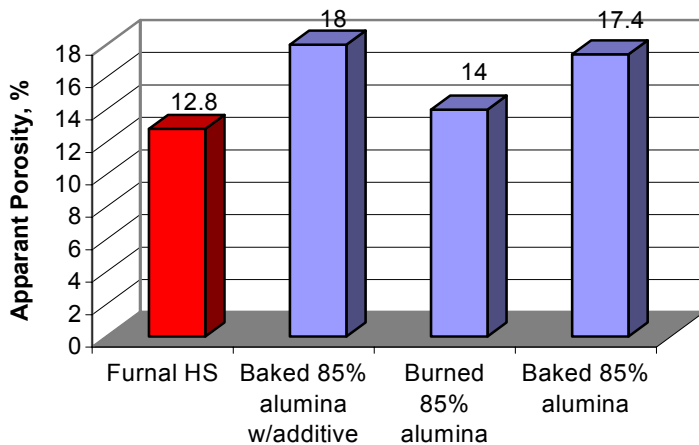
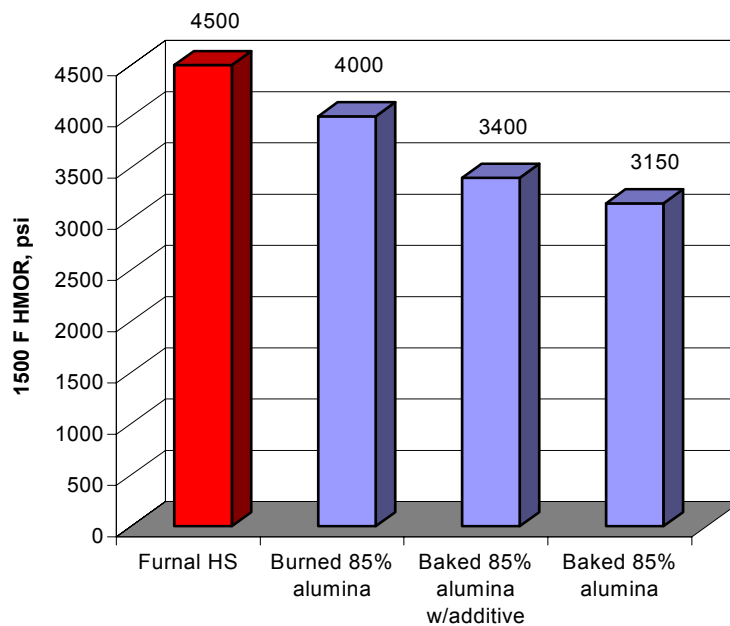
Furnal HS, Lo-Sil Super,
Rescal 80PA, Rescal 80BP

Furnal HS, Lo-Sil Super,
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Benefits of FURNAL

FURNAL HS as you can see from the hot strength data in the chart to the right, is clearly superior to its competition. The higher hot strength of FURNAL HS translates into longer life due to its ability to resist the mechanical forces encountered during charging.



FURNAL HS has significantly lower porosity than the competition which allows it to resist the penetration of aluminum, corundum and alkali salts.



FURNAL HS Users List

Hearth & lower sidewalls

- Scrapwell melter in Michigan
- Scrapwell melter in Pennsylvania
- Two holding furnaces in Indiana
- Three melting furnaces in Indiana
- Holding furnace in Oklahoma



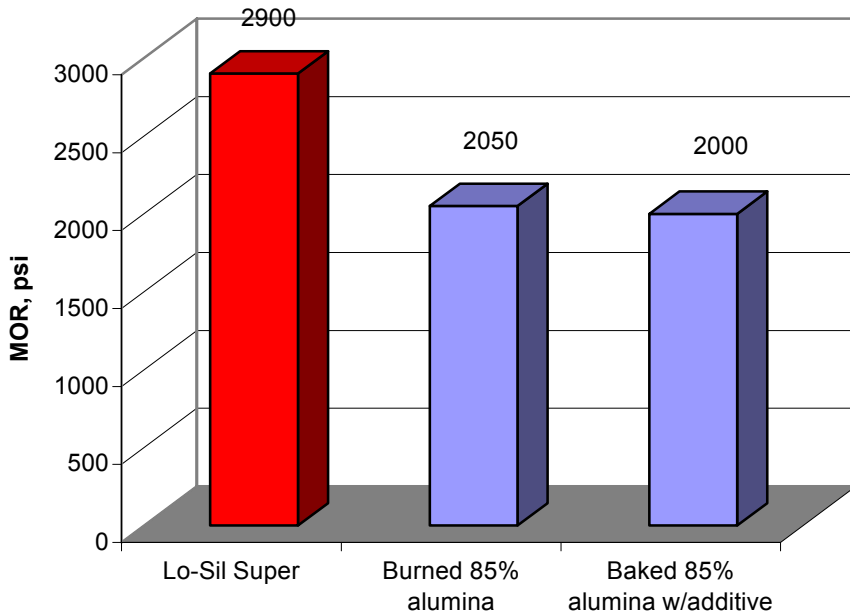
- Top charge melter in Ohio
- Reverb melter in Ohio
- Reverb melter in Pennsylvania

Hearth

- Scrapwell melter in Michigan
- Holding furnace in Pennsylvania
- Three top charge melters in Washington
- Holding furnace in Washington
- Reverb melter in Ohio



Benefits of LO-SIL SUPER



LO-SIL SUPER has excellent strength which will give it the toughness it needs to stand up to the brutal punishment handed out in round top charge melters or reverberating melting furnaces.

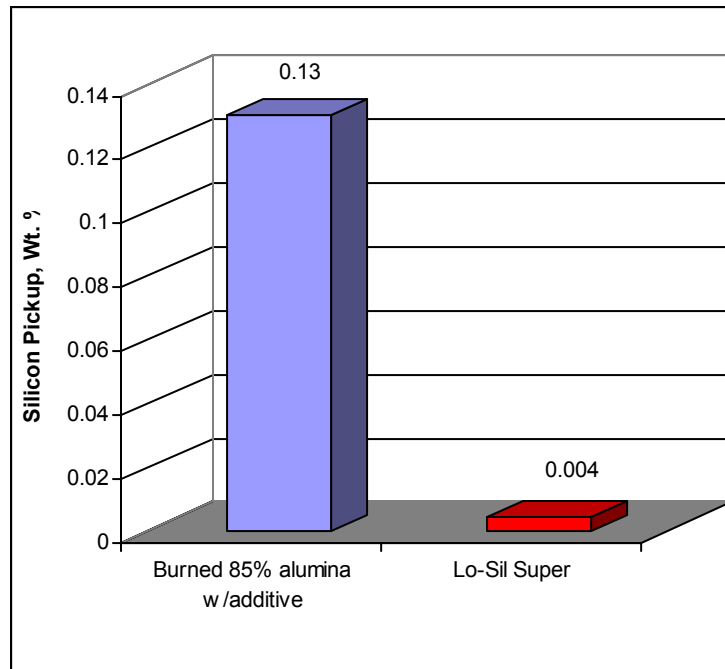
Due to the purity of the formulation, LO-SIL SUPER has outstanding resistance to the reducing environment seen in the “belly band”, lower sidewall and hearth of furnaces. Silicon pickup is a measure of a product’s ability to resist corrosion; the lower the pickup the better the product.

Sizing Capability

FURNAL HS, RESCAL 80PA, RESCAL 80BP, and LO-SIL SUPER brick are capable of the following tolerances:

Length & Width +/- 0.06”

Thickness +/- 0.03”



LO SIL SUPER Users List

Lower sidewall

- Scrapwell melter in Michigan
- Top charge melter in West Virginia

Hearth

- Two top charge melters in Washington



Hearth and lower sidewall

- Scrapwell melter in Ohio
- Five top charge melters in West Virginia
- Two Tilting holding furnace in West Virginia

Choosing The Right Mortar

When constructing a brick furnace it is imperative that you choose the right mortar. The key features of the ideal mortar are:

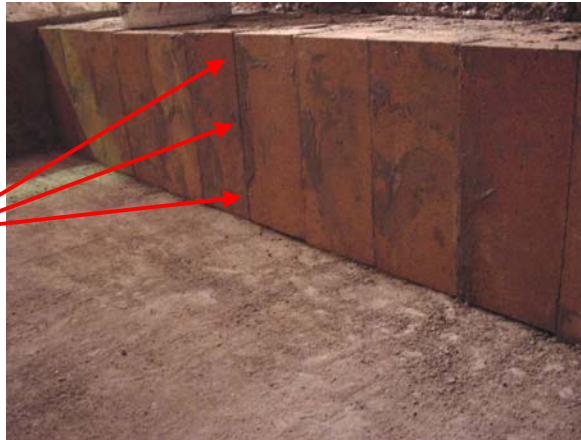
- Joint strength.
- Non-wetting.
- Easy to apply, but it must be sticky so the mortar doesn't run off the joint.

RESCO offers many mortars that fulfill all of the above criteria. You can choose a premixed wet mortar or a dry mortar that lets you mix to the consistency you like while offering longer shelf life.

MORTAR	General Description
RESCOSET 90P	90% alumina, wet mortar that is phos-bonded
HILO-AL	80% alumina, wet mortar that is phos-bonded and non-wetting to aluminum.
RESCOSET 80P	80% alumina, wet mortar that is phos-bonded.
ALUTAB	85% alumina, dry, air-setting mortar

The mortar is to be evenly distributed from the top to the bottom of the brick that is being laid in a soldier course.

If the mortar runs to the bottom of the joint it will kick the brick out, forming a mortar joint that looks like a pie section as opposed to a thin rectangular line. The mortar joint should be 3mm thick.



Hammer

Wedges

It is extremely important to keep the soldier courses in the hearth tight. In order to assure the tightness make sure you wedge the courses as you go!

Expansion allowance is recommended in floor construction. One sixteenth of an inch every 18 inches in each direction is typical.