

Abrasion and Temperature Resistant High Alumina Ceramic Linings



- Use where equipment tolerances or weight restrictions allow only a thin wear resistant lining.
 - Configurations in thickness as low as 1 mm (0.04 in).
 - Outlasts other products up to ten times.
 - FDA approved.
 - Multiple attachment methods, such as welding and adhesives.
Protects high speed moving parts: impellers, fan blades, mixer plows, augers and screw lightings.
- Effectively handles severe abrasion in elbows with tight radii.
 - Specify for existing systems or original equipment.
 - Custom engineered for specific applications.

Winco Surf Linings

Winco Surf high density alumina ceramic linings and abrasion resistant tiles prevent destructive wear in conveying, processing, and storage equipment. Made from high purity, fine grain, alpha aluminum oxide, a material almost diamond hard, Winco Surf thin wear resistant linings can be formed in a variety of pre-engineered standard and custom sizes and shapes.

Installation: pipes, shaped components, or thin tiles laid in epoxy, RTV or welded attachment. Winco Surf tiles vulcanized into rubber mats for installation by gluing are available.

Application temperature: up to 1000°C / 1832°F depending on application and geometry.

Advantages: highly wear resistant, smooth surface that lasts, no corrosion, available from 1.5 mm thickness.



Winco Surf piping elements from Wingate Alloys can be placed with high performance adhesive.



Weld-on Winco Surf high alumina ceramic tiles protect this cone against wear and thermal shock.

Winco SurfCB Linings

Wear Resistant Fused Cast Basalt Linings For Friction Induced Abrasion

- Cast basalt linings can be used up to temperatures of 350°C/662°F.
- FDA approved.
- Standard cylinder sizes range from 40 mm to 500 mm internal diameter for pipes and bends.
- Highly effective in hydraulic and pneumatic conveying systems with some installations lasting more than 30 years.
- Production of virtually any shape or size lining.
- Winco SurfCB wear resistant linings get smoother with use, ensuring good flowability and the avoidance of plugs, reducing pressure losses and lowering energy costs.
- Special tile shapes are made for larger pipe diameters, cyclones, chutes, separators and Archimedes type screw pumps.

Winco SurfCB fused cast basalt linings are a mineral based, wear resistant material that protects material handling and processing components conveying abrasive materials. The pre-engineered Winco SurfCB abrasion resistant linings and tiles are produced by melting volcanic rock, then casting into shaped tiles or cylinders, and annealing at carefully controlled temperatures to attain the desired hardness.

Installation: cylinders or shaped components in cement mortar. In special cases epoxies or synthetic mortars may be used due to strong mechanical stresses and/or vibration. Where higher temperatures are concerned, potassium silicate mortar may be used for installation.

Application temperature: up to 350°C/ 662°F depending on application and geometry.

Advantages: highly abrasion resistant, smooth surface that lasts, no corrosion.



With life times of more than 30 years, Winco SurfCB pipelines have been used for the hydraulic conveying of ash on all continents. This plant in the U.S. has over 10,000 meters of 294 mm ID pipe in service.



Hopper in a large German blast