

Alumina Ceramic Tiles

- for abrasion, corrosion and low friction resistant applications

C.B.P. Engineering Corp., 185 Plumpton Avenue, Washington, PA 15301 USA

Tel: 800-468-1180 Fax: 724-229-1185

Email: info@cbpengineering.com URL: www.cbpengineering.com

C.B.P. ENGINEERING CORP.

DESIGN * MANUFACTURING * INSTALLATION
ABRASION-RESISTANT CONVEYING AND MATERIALS HANDLING SYSTEMS

Alumina Ceramic – Abrasion Resistant Linings

Alumina is a cost effective and widely used material in the family of engineered ceramics. Alumina ceramics have been developed and optimized for maximum wear resistance and corrosion resistance. A high density, diamond like hardness, fine grain structured and superior mechanical strength are the unique properties that make it the material of choice for a wide range of demanding applications.

Ceramic has uses similar to cast basalt but it has greater resistance to wear in high velocity applications and impact resistance in extreme dynamic systems.

CBP Engineering provides its customers with the full range of abrasion resistant lined pipe work including straight pipe and elbows, reducers, tees and y-pieces. CBP Engineering offers a comprehensive range of lining materials designed to combat erosion.



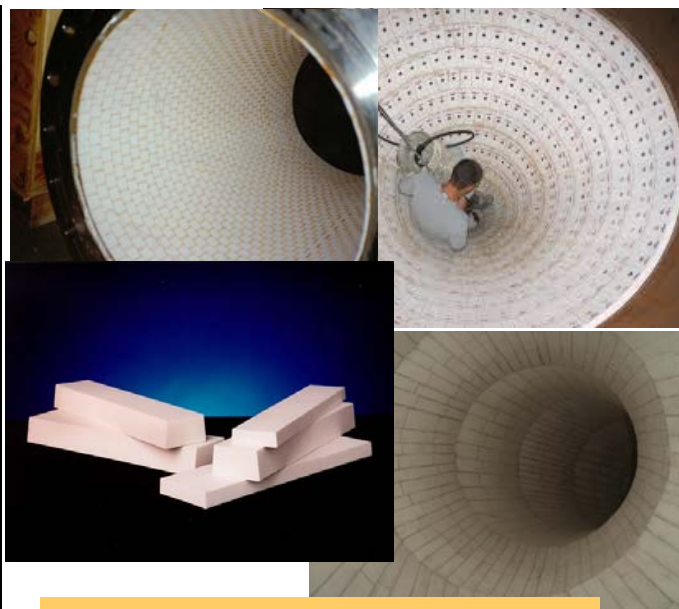
Installed on site or in our factory

Ceramic tiles can be bedded and jointed in cement or special bonding agents such as epoxy.

CBP Engineering can assist you in the technical analysis to optimise the matching of mortars and cements to meet the applications at your plant.

CBP Engineering also offers on site installation services providing skilled labor and supervision.

General Technical Specifications	Unit	Value
Nominal Aluminum Oxide Content	AL ₂ O ₃ %	90
Density	g/cm ³	3.52
Hardness Hv ₅ (KHN ₅)	kg/mm ²	918
Flexural Strength (3 Point)	kpsi	40
Compressive Strength	kpsi	256
Fracture Toughness, K _{IC} (Indentation)	Mpa m ^{1/2}	3.75
Youngs Modulus x 10 ⁶	psi	39
Shear Modulus x 10 ⁶	psi	16
Maximum Use Temperature	°C	1250
Thermal Shock (Hasselman)	°C	250
Thermal Expansion, 20-800C	x10 ⁻⁶ /C	8.30
Thermal Conductivity, 25C	W/m/K	18
After Firing Grain Size	Fm	3-4
Water Absorption		None
Gas Permeability		None



Delivering Solutions

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DELIVERING SOLUTIONS

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Available Sizes and Shapes

- Straight-Sided Tile - from 1/4" to 2" (12mm to 50mm) thickness, in solid or weldable-type tile design.
- Thin Tile - from 1/8" to 1/4" (3mm to 6mm) thickness.
- Mechanically Interlocking Tile (Tongue and Grooved) - from 1" to 4" (25mm to 100mm) thickness.
- Hexagonal Tile — from 1/8" to 1" (3mm to 25mm), in 6" x 6" (152mm) matted, or custom matted for convex and concave surface linings. Loose, flat to flat, or point to point hex tile pieces also available.
- Side-Angled Pipe Tile - in 1/2" (12mm) and 1" (25mm) thicknesses.
- Monolithic Cylinders



C.B.P. offers onsite installation of tile for chutes, hoppers, bunkers, boxes etc. C.B.P. site employees are fully OSHA/MSHA trained



CERAMIC LINING SPECIFICATIONS

- Talk to the abrasion resistant professionals at CBP Engineering before choosing a lining material for your application.
- Although all ceramic may look alike, the manufacturing process and even the point of manufacturer can vary greatly and affect the ceramic's performance in your critical application.
- CBP Engineering's vast experience of testing, supplying and installing ceramics makes us uniquely qualified to offer our expertise to customers considering an abrasion resistant lining.

CBP Engineering Corp. - Taking care of our customer's abrasion problems for **over 60 years!** Don't settle for less.

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