

Washington Mills Fused Minerals for Refractory Applications



Washington Mills is one of the world's largest producers of fused refractory raw materials and is a supplier known for its reliability, quality and expertise. The Washington Mills refractory line of products includes: fused alumina (brown & white), silicon carbide, mullite, spinel, zirconia mullite, mag-chrome, boron carbide, fused silica, high purity zirconia and custom fused materials.

For every refractory application, Washington Mills offers the optimum solution: a fused material with the ideal chemistry and structure for the type of wear resistant protection required, perfectly suited for use in manufacturing your end-product. We manufacture a wide range of particle sizes in precise, uniform compositions and with desired mechanical strength, chemical stability, thermal conductivity, abrasion and corrosion resistance to meet your application challenges.

Choosing the proper refractory material for your application is critical because poor quality materials can lead to excessive maintenance and equipment failure – resulting in recurring downtime, lost production and erosion of profits. Our refractory materials are designed to extend equipment life wherever reliable control or containment of high temperature processes is critical.

Washington Mills is the only manufacturer of refractory raw materials in North America that controls the entire manufacturing process of crude to finished grits from start to finish. Our total process control ensures that we supply refractory products that are consistent in quality and performance. Washington Mills is prepared to service your refractory raw material needs.

Contact us today to learn more about our products. tel: 716-278-6600
or toll free: 800-828-1666

WASHINGTON MILLS

Washington Mills Fused Minerals for Refractory Applications

DURALUM RF: Brown Fused Alumina

Brown fused aluminum oxide grain is widely used in dense, high temperature, unshaped refractory products (ramming mixes, castables and loose grain) for the iron, steel, and foundry industries.

DURALUM WH RF: White Fused Alumina

Fused Bayer process alumina offers added purity at elevated temperatures – in bonded products and loose grain; and in lower density form (with hollow spheres or bubbles), it is used in light-weight insulating refractories requiring low thermal conductivity.

CARBOREX: Silicon Carbide

High purity silicon carbide grain (fused quartz and coke) is used in bonded refractory products requiring exceptionally high thermal conductivity, chemical stability, hot strength, and resistance to thermal shock or corrosion from gases, acids, slags and melted metals – such as blast furnace linings and stacks, kiln furniture, incinerators and heating elements.

DURAMUL & DURAMUL ZR: Fused Mullite and Zirconia Mullite

Fused Mullite (Bayer-process alumina and high purity silica) and Zirconia Mullite (fused calcined alumina and zircon sand) are for applications demanding low thermal expansion, excellent thermal shock resistance, excellent hot strength under load, and high resistance to spalling or corrosion: kilns, slide gates, nozzles and lances, glass industry furnace bricks, burner pots and flue gas heat extractors, setters/saggers for firing electronic substrates, spark plug bodies, laboratory ware, and ceramic pressure casting tubes.

Fused Spinel

Fused Spinel grain (magnesia and Bayer-process alumina or bauxite) improves slag resistance in castables, and shaped refractories for aluminum and magnesium metal contact. It is also used in brick for cement and lime rotary kiln linings and glass furnace regenerators, and protective coatings on zirconia oxygen sensors in automobile fuel tanks.

DURAZON: Fused Zirconia

Fused Zirconia (monoclinic, calcia-stabilized grain/bubbles and zirconia-alumina-silica grain) offers low thermal conductivity, a high melting point and chemical inertness (in oxidizing and reducing atmospheres). It is widely used in: slide gates and nozzles for the steel industry, fused cast brick for glass furnaces, kiln furniture setters for firing electro-ceramics, automobile engine oxygen sensors, advanced ceramic tool/die/equipment and component parts, bio-ceramics, and nuclear industry construction materials.

MGC-18: Fused Mag-Chrome

Fused Mag-Chrome (fused magnesia-chrome grain) has good mechanical strength and volume stability at high temperatures, plus exceptional resistance to corrosion by chemically basic slags – making it especially suited to refractories (brick, castables, plastics, ramming mixes) for the steel and copper industries.

Boron Carbide

Boron Carbide (one of the hardest man-made materials) boasts a finite melting point low enough to permit relatively easy fabrication into shapes, plus chemical inertness and high neutron absorption cross section – properties useful in wear parts, nuclear reactor control rods, neutron absorbing shielding, and anti-oxidants for carbon-bonded refractory mixes.

Fused Silica

Fused Silica is over 99% amorphous and has an extremely low coefficient of thermal expansion and a high resistance to thermal shock. It is an excellent material for use in applications that require a consistent, high purity product with low thermal expansion.

Tel: 716.278.6600 • Toll Free: 800.828.1666 • info@washingtonmills.com