

BLASTITE[®]

BROWN ALUMINUM OXIDE

WASHINGTON MILLS



A Manufacturing Leader in Fused Minerals since 1868

WASHINGTONMILLS.COM | 1-800-828-1666



Hard, Tough, Productive

BLASTITE® is the hardest, toughest and most productive blasting abrasive you can buy. Washington Mills is the only start-to-finish manufacturer of Brown Aluminum Oxide in North America, guiding the product from crude to grain.

Of all the blasting materials on the market, BLASTITE® stands alone in terms of hardness, toughness and the productivity it offers you.

Durable BLASTITE® grains, when propelled by air, become powerful multi-edged abrasive tools that penetrate work pieces, dig out microchips, and consistently leave exceptionally clean, etched surfaces in their wake. BLASTITE® grains are highly effective on many surfaces, including metals, glass, ceramics, marble, granite and other stone.

MANUFACTURED WITH PRECISION CARE

Washington Mills produces BLASTITE® by melting abrasive-grade bauxite in electric arc furnaces at temperatures exceeding 3,400 degrees Fahrenheit under very strict chemistry. The resulting liquid aluminum oxide is poured into molds where it solidifies, forming large alumina crystals. Ingots are cooled then systematically crushed and ground into trillions of particles at our multiple processing plants in the United States and Canada. The crushed material is then sized into individual grits.

The entire manufacturing process is precisely monitored from raw material to finished grits. BLASTITE® is carefully analyzed for lot-to-lot uniformity and closely tested for grain characteristics, assuring optimal performance in dry or wet blasting applications.

SUPERIOR PROPERTIES

BLASTITE® has a single crystalline structure – marked by uniformly high strength throughout. Its grains are manufactured in blocky shapes with multiple, sharp-cutting edges. BLASTITE® is an inert material containing no free silica or contaminants. It is unaffected by atmosphere and non-reactive with alkalis or acids.

UNMATCHED AVAILABILITY

No other abrasive grain manufacturer can match the ready availability of BLASTITE®. Washington Mills is one of the world's largest producers of Brown Aluminum Oxide, manufacturing in excess of 100 million pounds annually. We produce a broad range of BLASTITE® grit sizes specifically for blasting applications to meet your every need.



Outstanding Performance

CHARACTERISTICS & PERFORMANCE BENEFITS

Exceptional Hardness

Fast-cutting, aggressive abrasive which results in shorter work cycles, increased production, lower labor costs, and optimal equipment utilization.

Toughness

Stronger, long-lasting blast media typically lasting 6-8 blasting passes when used with a reclaim system. Tight bonding of very large dense crystals during the solidification process enhances toughness. The presence of Titania (TiO₂) in solid solution within the alumina crystals and within the grain boundaries contribute to toughness.

Lightweight

At one-third the weight of comparable steel media, you get more abrasive particles per pound, and a more effective use of airstream.

No Free Crystalline Silica

Unlike sand and many naturally occurring minerals, BLASTITE® is not a silicosis hazard to workers.

CONSISTENT HIGH QUALITY

Precise sizing of BLASTITE® grits results in consistent surface finishes.

BLASTITE® is produced to conform with all major industrial and governmental standards, including:

- MIL CID A-A-59316, Type I, Grades A, B, and C
- General Electric Aircraft Engine Group D50TF5 and most Pratt and Whitney Aircraft PMC specifications
- ANSI B74.12 specifications

Precise process control, in place at all Washington Mills facilities, assures minimal grain variability from one shipment to another.

TYPICAL BLASTITE® APPLICATIONS

- Aircraft engine overhaul
- Cleaning of investment castings
- Glass etching or frosting
- Hard oxide removal (titanium, zirconium, etc.)
- Heat treat scale removal
- Matte finishing
- Mill scale removal
- Monument lettering
- Pipe blasting
- Rust removal
- Scale removal in steam turbines
- Surface preparation for thermal spray coatings

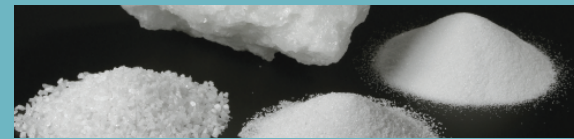
Other Washington Mills Blasting Abrasives

NIAGARA BLAST®



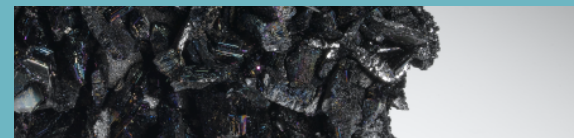
- Group-graded virgin brown aluminum oxide
- Used in blasting applications where size control is less critical
- Available grit sizes: 20, 40, 60, 80, 120, 150 and 180

DURALUM® SPECIAL WHITE aluminum oxide



- More closely graded, high purity, white aluminum oxide
- Composed of sharp, friable grains, specially treated for removal of iron
- Premium material for use where surface contamination is unacceptable
- Used in applications such as cleaning and deburring electrical circuit boards and medical devices
- Available grit sizes: 12 to 600

CARBOREX®



- Extremely hard, sharp silicon carbide grain that is more friable than aluminum oxide
- Used to blast extremely hard materials
- Available grit sizes: 12 to 1200

Hardness Comparisons

Blasting Media	MOHS Value	Knoop Value
Diamond	10.0	7,000
Silicon Carbide	9.0 - 9.5	2480
BLASTITE® Brown Aluminum Oxide	9.0	2100
Garnet	7.0	1360
Quartz	7.0	820
Sand	6.0	560

* The MOHS Hardness Scale measures the hardness of aluminum oxide in relation to other blasting media on a scale of 1-10.

* The Knoop Scale measures hardness on a scale of 0 - 7,000.

Grit Size Conversion

Grit Size	Inches (avg.)	Microns (avg.)
16	0.043	1092
20	0.037	940
24	0.027	686
30	0.022	559
36	0.019	483
46	0.014	356
54	0.012	305
60	0.010	254
70	0.008	203
80	0.0065	165
90	0.0057	145
100	0.0048	122
120	0.0040	102
150	0.0035	89
180	0.0030	76
220	0.0025	63

* The conversions listed are for various grits sized according to the Bureau of Standards specifications, under Simplified Practice Recommendation 118-50.

For more information on Washington Mills' pressure blasting abrasives, contact us directly.

General Inquiries, Sales and Customer Service

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Composition Analysis of Washington Mills' Blasting Grains

BLASTITE® / Niagara Blast®	
AL ₂ O ₃	96.12%
TiO ₂	2.70%
SiO ₂	0.67%
Fe ₂ O ₃	0.11%
Other Oxides	0.40%

DURALUM® Special White	
AL ₂ O ₃	99.60%
SiO ₂	0.03%
Fe ₂ O ₃	0.02%
Na ₂ O	0.35%

CARBOREX®	
SiC	97.60%
SiO ₂	0.60%
Si	0.80%
Fe	0.20%
Al	0.30%
C	0.50%

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