

WASHINGTON MILLS

# BLASTITE<sup>®</sup> BT

WASHINGTON





# Hard, Tough, Productive!

BLASTITE® is the hardest, toughest and most productive blasting abrasive you can buy. 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

BLASTITE® is produced by super-heating abrasive grade bauxite in electric-arc furnaces at temperatures exceeding 4,000 degrees Fahrenheit. The resulting aluminum oxide is poured into ingots, cooled and then systematically crushed into trillions of particles at our multiple processing plants in the United States, Canada and the U.K.

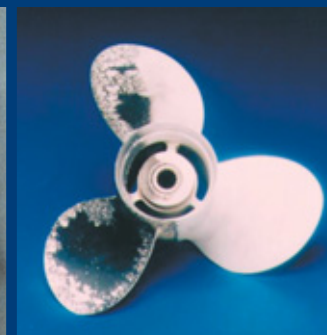
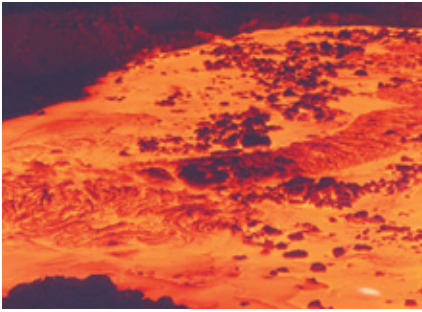
The entire manufacturing process is precisely monitored throughout. BLASTITE® is carefully analyzed for lot-to-lot uniformity and closely inspected for grain characteristics to insure you of optimal performance in dry or wet blasting applications.

## Superior Properties

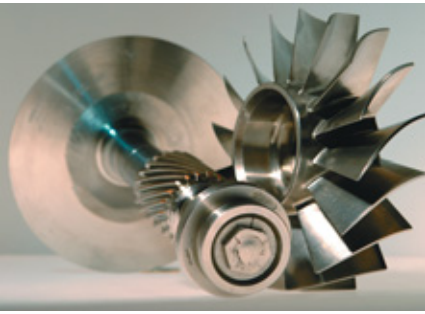
BLASTITE® has a single crystalline structure – marked by uniformly high strength throughout. Its grains are manufactured in blocky shapes with multiple, sharp cutting edges. BLASTITE® is an inert material containing no free silica or contaminants. It is unaffected by atmosphere and non-reactive with 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 aluminum oxide, manufacturing in excess of 100 million pounds annually. We produce BLASTITE® specifically for blasting applications, and in sufficient quantities and a broad enough range of grit sizes to meet your every need.



# Outstanding Performance



## BLASTITE® Characteristics

## Performance Benefits

**exceptional hardness**

**shorter work cycles, increased production, lower labor costs, optimal equipment utilization**

**durability  
(up to 20 passes)**

**less downtime to change system, less material used, lower disposal costs, less storage space required, less material handling, less dust, reduced equipment/component wear**

**light weight  
(1/3 the weight of comparable steel media)**

**more abrasive particles per pound, more effective use of airstream**

**no free crystalline silica  
(unlike sand and many naturally occurring minerals)**

**no silicosis hazard to workers**

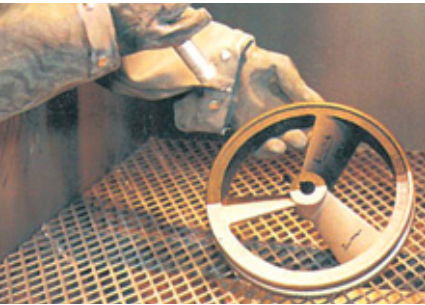


## Consistent High Quality

BLASTITE® is a virgin aluminum oxide. It contains none of the many impurities and contaminants found in re-claimed or re-processed aluminum oxide products.

BLASTITE® is produced to conform with all major industrial and governmental standards including: • CID A-A-59316 • ANSI B74.12-2001 • General Electric Aircraft Engine Group D50TF5 and most Pratt and Whitney Aircraft PMC specifications.

Statistical Process Control (SPC), in place at all Washington Mills facilities, assures you a minimum of grain variability from one shipment to another.



## Typical BLASTITE® Applications

- cleaning of investment castings
- scale removal in steam turbines
- surface preparation for thermal spray coatings
- rust removal
- hard oxide removal (titanium, zirconium, etc.)
- mill scale removal
- heat treat scale removal
- glass etching or frosting
- monument lettering
- aircraft engine overhaul
- matte finishing

## Other Washington Mills Blasting Abrasives

### NIAGARA BLAST®

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

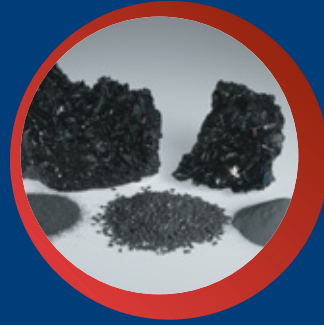
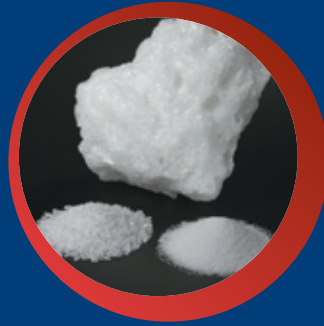
### DURALUM® SPECIAL WHITE Aluminum Oxide

- 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 in grit sizes 12 to 1200

### CARBOREX® RA

- extremely hard, sharp silicon carbide grain that is more friable than aluminum oxide
- used to blast extremely hard materials
- available in grit sizes 12 to 1200





## Composition Analysis of Washington Mills' Blasting Grains

### BLASTITE® NIAGARA BLAST®

|                                |        |
|--------------------------------|--------|
| AL <sub>2</sub> O <sub>3</sub> | 96.12% |
| TiO <sub>2</sub>               | 2.70%  |
| SiO <sub>2</sub>               | .67%   |
| Fe <sub>2</sub> O <sub>3</sub> | .11%   |
| Other Oxides                   | .40%   |

### DURALUM® SPECIAL WHITE

|                                |        |
|--------------------------------|--------|
| AL <sub>2</sub> O <sub>3</sub> | 99.60% |
| SiO <sub>2</sub>               | 0.03%  |
| Fe <sub>2</sub> O <sub>3</sub> | 0.02%  |
| Na <sub>2</sub> O              | 0.35%  |

### CARBOREX® RA

|                  |        |
|------------------|--------|
| SiC              | 97.60% |
| SiO <sub>2</sub> | 0.60%  |
| Si               | 0.80%  |
| Fe               | 0.20%  |
| Al               | 0.30%  |
| C                | 0.50%  |

## Hardness Comparisons

| Blasting Media             | MOHS Value | Knoop Value |
|----------------------------|------------|-------------|
| Diamond                    | 10.0       | 7000        |
| CARBOREX RA® (SiC)         | 9.5        | 2480        |
| BLASTITE® (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 (average) | Microns (average) |
|-----------|------------------|-------------------|
| 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, consult our nearest Industrial Distributor or contact us directly.

Tel: 716-278-6600  
Or Toll Free: 1-800-828-1666  
Visit our website:  
[www.washingtonmills.com](http://www.washingtonmills.com)

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## ANSI GRIT SIZE CONVERSION CHART

| Macro Grit | Inches         |                |                | Microns        |                |                |
|------------|----------------|----------------|----------------|----------------|----------------|----------------|
|            | <u>Maximum</u> | <u>Average</u> | <u>Minimum</u> | <u>Maximum</u> | <u>Average</u> | <u>Minimum</u> |
| 8          | 0.130          | 0.087          | 0.065          | 3300           | 2210           | 1650           |
| 10         | 0.105          | 0.073          | 0.055          | 2667           | 1854           | 1397           |
| 12         | 0.090          | 0.063          | 0.045          | 2286           | 1600           | 1143           |
| 14         | 0.075          | 0.053          | 0.037          | 1905           | 1346           | 940            |
| 16         | 0.065          | 0.043          | 0.031          | 1650           | 1092           | 787            |
| 20         | 0.053          | 0.037          | 0.026          | 1346           | 940            | 660            |
| 24         | 0.043          | 0.027          | 0.018          | 1092           | 686            | 457            |
| 30         | 0.032          | 0.022          | 0.014          | 813            | 559            | 356            |
| 36         | 0.030          | 0.019          | 0.012          | 762            | 483            | 305            |
| 46         | 0.022          | 0.014          | 0.0095         | 559            | 356            | 241            |
| 54         | 0.0195         | 0.012          | 0.0080         | 495            | 305            | 203            |
| 60         | 0.0160         | 0.010          | 0.0065         | 406            | 254            | 165            |
| 70         | 0.0130         | 0.008          | 0.0050         | 330            | 203            | 127            |
| 80         | 0.0115         | 0.0065         | 0.0040         | 292            | 165            | 102            |
| 90         | 0.0095         | 0.0057         | 0.00350        | 241            | 145            | 89             |
| 100        | 0.0080         | 0.0048         | 0.0025         | 203            | 122            | 63             |
| 120        | 0.0065         | 0.0040         | 0.0020         | 165            | 102            | 50             |
| 150        | 0.0055         | 0.0035         | 0.0015         | 140            | 89             | 38             |
| 180        | 0.0045         | 0.0030         | 0.0010         | 114            | 76             | 25             |
| 220        | 0.0040         | 0.0025         | 0.0008         | 102            | 63             | 20             |

| Micro Grit | Inches         |                |                | Microns        |                |                |
|------------|----------------|----------------|----------------|----------------|----------------|----------------|
|            | <u>Maximum</u> | <u>Average</u> | <u>Minimum</u> | <u>Maximum</u> | <u>Average</u> | <u>Minimum</u> |
| 240        | 0.00330        | 0.00200        | 0.00099        | 85             | 50             | 25             |
| 280        | 0.00280        | 0.00154        | 0.00075        | 70             | 39             | 19             |
| 320        | 0.00240        | 0.00122        | 0.00055        | 60             | 31             | 14             |
| 400        | 0.00180        | 0.00087        | 0.00043        | 45             | 22             | 11             |
| 500        | 0.00160        | 0.00075        | 0.00039        | 40             | 19             | 10             |
| 600        | 0.00140        | 0.00063        | 0.00035        | 35             | 16             | 9              |
| 700        | 0.00130        | 0.00055        | 0.00028        | 32             | 14             | 7              |
| 800        | 0.00120        | 0.00047        | 0.00020        | 30             | 12             | 5              |
| 900        | 0.00090        | 0.00035        | 0.00012        | 23             | 9              | 3              |
| 1000       | 0.00090        | 0.00028        | 0.00008        | 23             | 7              | 2              |
| CF1        | 0.00374        | 0.00189        | 0.00087        | 95             | 48             | 22             |
| F          | 0.00303        | 0.00160        | 0.00071        | 77             | 40             | 18             |
| FF         | 0.00270        | 0.00130        | 0.00055        | 67             | 33             | 14             |
| FFF Coarse | 0.00217        | 0.00099        | 0.00043        | 55             | 25             | 11             |
| FFF        | 0.00180        | 0.00075        | 0.00039        | 45             | 19             | 10             |
| FFFF       | 0.00140        | 0.00043        | 0.00016        | 35             | 11             | 4              |