

# DURALUM® SPECIAL WHITE



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## DESCRIPTION

DURALUM® SPECIAL WHITE is a pure, clear white aluminum oxide. DURALUM® SPECIAL WHITE makes the whitest vitrified wheels possible, with low soda and silica content. DURALUM® SPECIAL WHITE is the most friable aluminum oxide. Due to its high purity and large crystal size, DURALUM® SPECIAL WHITE crystals fracture comparatively swiftly, constantly exposing fresh cutting crystals to the work piece.

## APPLICATIONS

DURALUM® SPECIAL WHITE is used in the grinding of heat sensitive alloys, taking advantage of its friability and cool cutting ability. Widely used in precision grinding of high speed steels, segments and internal grinding wheels.

## TYPICAL CHEMICAL ANALYSIS

Al <sub>2</sub> O <sub>3</sub> (by difference)	99.76%
SiO <sub>2</sub>	0.02%
Fe <sub>2</sub> O <sub>3</sub>	0.02%
Na <sub>2</sub> O	0.20%

## GRAIN SIZES AVAILABLE

12, 14, 16, 20, 24, 30, 36, 46, 54, 60, 70, 80, 90, 100, 120, 150, 180, and 220

## POWDER SIZES AVAILABLE

240, 280, 320, 400, 500, 600, 800, 1000, 1200, F, FF, FFF

*Specialty sizes available upon request*

## TYPICAL PHYSICAL PROPERTIES

Crystallography	Alpha alumina, in the hexagonal crystal system
Color	White
Specific Gravity	3.96
Knoop <sub>100</sub> Hardness	2150
Shape	Blocky, with sharp edges
Average crystal size	2,500 microns, no matrix
Porosity: Total Volume	5.5 %
Grading (Grain)	ANSI B74.12-2001, Table 2 OR FEPA 42-1:2006
Grading (Powder)	ANSI B74.10-2001 OR FEPA 42-2:2006
Bulk Density	ANSI B74.4-1992 (R2007)
Magnetics	ANSI B74.19-2002 (R2007)

## TYPICAL BULK DENSITY

Grit	g/cc	Grit	g/cc	Grit	g/cc	Grit	g/cc
12	1.74 – 1.84	30	1.75 – 1.85	70	1.68 – 1.78	150	1.59 – 1.69
14	1.76 – 1.86	36	1.74 – 1.84	80	1.68 – 1.78	180	1.56 – 1.66
16	1.78 – 1.88	46	1.74 – 1.84	90	1.63 – 1.73	220	1.53 – 1.63
20	1.77 – 1.87	54	1.71 – 1.81	100	1.62 – 1.72		
24	1.76 – 1.86	60	1.71 – 1.81	120	1.64 – 1.74		

This product information is NOT a specification. It is offered in good faith only as a general description of the product. Washington Mills makes no warranty of merchantability or of fitness for any particular purpose. The product chemistry and other characteristics may vary or contain trace elements not specifically listed. If your intended application for this product is so critical that relatively minor variations in chemistry or physical properties could cause problems or damage to your process or product, please contact our office for further assistance.

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## Washington Mills AS

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## DESCRIPTION

DURALUM® is a tough virgin fused brown aluminum oxide abrasive containing no free silica.

## APPLICATIONS

DURALUM® is a general purpose blasting and polishing grain that is widely used for flat lapping, polishing, and other finishing operations on materials such as glass, ceramics, granite, silicon, and metal. DURALUM® is more closely sized than other blasting grains to ensure consistent duplication of surface finishes.

## TYPICAL CHEMICAL ANALYSIS

Al <sub>2</sub> O <sub>3</sub> (by difference)	96.05%
TiO <sub>2</sub>	2.70%
SiO <sub>2</sub>	0.70%
Fe <sub>2</sub> O <sub>3</sub>	0.10%
CaO	0.15%
MgO	0.30%

## GRAIN SIZES AVAILABLE

6, 8, 10, 12, 14, 16, 20, 24, 30, 36, 46, 54, 60, 70, 80, 90, 100, 120, 150, 180, 220, and 240

## POWDER SIZES AVAILABLE

240, 280, 320, 360, 400, 500, 600, 800, 1000, 1200, F, FF, and FFF

## TYPICAL PHYSICAL PROPERTIES

Crystallography	Alpha alumina, in a hexagonal crystal
Color	Brown
Specific Gravity	3.92
Knoop <sub>100</sub> Hardness	2050
Shape	Blocky with sharp edges
Grading (Grain)	ANSI B74.12-2001, Table 2 OR FEPA 42-1:2006
Grading (Powder)	ANSI B74.10-2001 OR FEPA 42-2:2006
Bulk Density (Grain)	ANSI B74.4-1992 (R2007)

## TYPICAL BULK DENSITY

Grit	g/cc	Grit	g/cc	Grit	g/cc	Grit	g/cc
6	2.17	20	1.99	60	1.82	150	1.67
8	2.14	24	1.96	70	1.79	180	1.63
10	2.13	30	1.93	80	1.74	220	1.61
12	2.09	36	1.87	90	1.71		
14	2.06	46	1.85	100	1.71		
16	2.03	54	1.84	120	1.70		

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