DURAMUL

General Inquiries
North & South America
Tel: 1-800-828-1666
Europe
Tel: +44(0)161-848-0271
info@washingtonmills.com
www.washingtonmills.com

Washington Mills
North Grafton, Inc.
P.O Box 428
20 North Main Street
North Grafton, MA 01536
Tel: 508-839-6511
Fax: 508-839-7675
Email: info@washingtonmills.com

Washington Mills
Electro Minerals Corp.
P.O Box 423
1801 Buffalo Avenue
Niagara Falls, NY 14302
Tel: 716-278-6600
Fax: 716-278-6650
Email: info@washingtonmills.com

Washington Mills
Electro Minerals Corp.
P.O Box 1002
7780 Stanley Avenue
Niagara Falls, Ontario L2E 6V9 Canada
Email: info@washingtonmills.com

Washington Mills
Tonawanda, Inc.
1000 E. Niagara Street
Tonawanda, NY 14150
Email: info@washingtonmills.com

Washington Mills
Electro Minerals Ltd.
Mosley Road, Trafford Park
Manchester M17 1NR England
Email: info@washingtonmills.com

Washington Mills Hennepin, Inc.
13230 Prairie Industrial Parkway
Hennepin, IL 61327
Email: info@washingtonmills.com

Washington Mills AS
NO-7300
Orkanger, Norway
Email: wmas@washingtonmills.no

DESCRIPTION

DURAMUL is a fused, high purity mullite produced by the electric furnace fusion of Bayer process alumina and high purity silica. There is an excess of aluminum oxide above the normal mullite ratio ($3\ Al_2O_3 : 2\ SiO_2$) to ensure that all of the SiO_2 is contained within the mullite phase and is not present in the glass phase. DURAMUL receives high intensity magnetic treatment to remove virtually all of the magnetic iron present.

APPLICATIONS

DURAMUL is utilized in the manufacture of refractory products where hot strength, resistance to spalling, and low thermal conductivity are important factors.

TYPICAL CHEMICAL ANALYSIS

Al_2O_3 (by difference)	75.00%
SiO_2	24.70%
Na_2O	0.30%

TYPICAL PHYSICAL PROPERTIES

Crystallography	Fragments of columnar joining crystals in the Orthorhombic system with trace quantities of hexagonal aluminum oxide crystals.
Color	White
Specific Gravity	3.15
Melting Point	1830° C

TYPICAL THERMAL PROPERTIES

Useful Temperature Ranges	1800°C in Air; 1500° - 1700°C in Vacuum
Thermal Conductivity (0% porosity) *(cal / sec · cm · °C)*	0.0145 at 100°C ; 0.013 at 200°C 0.011 at 400°C ; 0.010 at 600°C 0.0095 at 800°C ; 0.009 at 1000°C 0.008 at 1200°C ; 0.009 at 1400°C
Coefficient of Linear Expansion	4.63×10^{-6} per °C: 25-500°C 5.13×10^{-6} per °C: 25-1000°C 5.62×10^{-6} per °C: 25-1500°C

SIZES AVAILABLE

4/8, 8/10, 10/36, 16/35, 35/70, 6/F, 20/F, 40/F, 80/F, 100/F, 200/F, 325/F, DCF
Other Sizes Available Upon Request

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