

# DURAMUL E.G.

## 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 E.G. 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 ( $3 \text{ Al}_2\text{O}_3 : 2 \text{ SiO}_2$ ) to ensure that all of the  $\text{SiO}_2$  is contained within the mullite phase and is not present in the glass phase. DURAMUL E.G. receives high intensity magnetic treatment to remove virtually all of the magnetic iron present. Each lot is sampled and test fired to insure against contamination.

## APPLICATIONS

DURAMUL E.G. is utilized in the manufacture of refractory products where hot strength, resistance to spalling and low thermal conductivity are important factors. Such applications include setters and saggars for firing electronic substrates, spark plug bodies, and laboratory ware.

## TYPICAL CHEMICAL ANALYSIS

$\text{Al}_2\text{O}_3$ (by difference)	75.00%
$\text{SiO}_2$	24.70%
$\text{Na}_2\text{O}$	0.30%

## TYPICAL PHYSICAL PROPERTIES

Crystallography	Fragments of columnar joining crystals in the Orthorhombic system with trace quantities of hexagonal aluminum oxide crystals.
Color	Brilliant 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	$4.63 \times 10^{-6}$ per °C: 25-500°C $5.13 \times 10^{-6}$ per °C: 25-1000°C $5.62 \times 10^{-6}$ per °C: 25-1500°C

## SIZES AVAILABLE

10/F, 20/F, and 100/F

*Other splits are available upon request*

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.