

FUSED SILICA
HOT PRESS PLATENS
CASTABLE CERAMICS
FIRED SHAPES
AEROSPACE TOOLING

Foundry Service & Supplies, Inc.

HI-TEMP INSULATIONS
CALCIUM SILICATE BOARDS
MILLBOARD AND BLANKET
PAPERS AND CFMENTS
CUTTING AND FABRICATING

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Lava (Aluminum Silicate) Machinable Ceramic

ELECTRICAL & MECHANICAL DATA

Data Figures Are After Firing

TYPE OF MATERIAL			L A V A	
			Machined from Natural Stone	
PRPOERTY	TEST METHOD	UNIT	GRADE "A" Aluminum Silicate	GRADE "M" Magnesium Silicate
Water Absorption	ASTM D 116-42A	%	2.5	0.97
Specific Gravity			2.3	2.8
Density		lbs. per	0.085	0.1
Color			Pink	Brown
Hardness		Mohs' Scale	6	6
Tensile Strength	ASTM D 116-42	lbs. per sq. in	3,000	2,600
Compressive Strength	ASTM D 667-42T	lbs. per sq. in	25,000	30,000
Flexural Strength	ASTM D 667-42T	lbs. per sq. in	10,000	11,000
Softening Temperature		°C °F	1,600 2,912	1,475 2,687
Linear Coefficient of Thermal Expansion 25°C. -100°C. 25°C. -600°C.		per °C.	2.9×10^{-6} 3.6×10^{-6}	8.2×10^{-6} 8.9×10^{-6}
Te Value		°C	700	750
Dielectric Strength (Step 60 cycles)	ASTM D 667-42T	volts per mil	100	100
Dielectric Constant	Jan-1-10	at 1 MC	5.3	5.5
Power Factor	Jan-1-10	at 1 MC	0.01	0.006
Loss Factor	Jan-1-10	at 1 MC	0.053	0.033
PRINCIPAL USES			Machined parts with close tolerances and good dielectric properties. Very low coefficient of thermal expansion. Can be supplied in larger sizes than other grades of Lava.	Machined parts for Electrical Equipment and Appliances where close tolerances are required.