



## SUMMARY OF PHYSICAL PROPERTY VALUES

### SURFACE PLATE GRANITES

Property	Test Method	Unit of Measure	Academy Black	Sierra White
Absorption	ASTM C97	% by weight	0.11%	0.31%
Density	ASTM C97	lbs/ft <sup>3</sup>	181.6	167.3
Bulk Specific Gravity	ASTM C97		2.92	2.65
Modulus of Rupture	ASTM C99	lbs/in <sup>2</sup>	2,410	2,130
Compressive Strength	ASTM C170	lbs/in <sup>2</sup>	24,200	17,180
Abrasion Resistance	ASTM C241	HA	68.7	61.0
Flexural Strength	ASTM C880	lbs/in <sup>2</sup>	2,210	1,670
Flexural Modulus of Elasticity <sup>1</sup>	ASTM C1352	lbs/in <sup>2</sup>	9.90E+06	3.38E+06
Flexural Modulus of Elasticity <sup>2</sup>	ASTM C1352	lbs/in <sup>2</sup>	1.10E+07	3.26E+06

<sup>1</sup>Flexural Modulus of Elasticity tested with load application Parallel to Rift Direction

<sup>2</sup>Flexural Modulus of Elasticity tested with load application Perpendicular to Rift Direction

Note: The above values represent historical averages over approximately 10 years of laboratory testing.

Additional Information:

#### Coefficient of Thermal Expansion

The generic number for “granite” is  $4.4 \times 10^{-6}$  / F° per Cold Spring Granite Co.

The following numbers are presumed to be correct but have not been verified:

Academy Black Granite  $3.84 \times 10^{-6}$  / F°

Sierra White Granite  $4.2 \times 10^{-6}$  / F°

Poisson’s Ratio for Granite    0.3