

Physical Properties

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Chemical Composition		
SiO ₂	Silica	45.6 - 56.5%
Al ₂ O ₃	Alumina	16.0 - 25.0%
Fe ₂ O ₃	Iron	5.4 - 8.4%
TiO ₂	Titania	0.7 - 1.9%
MnO	Manganese	0.0 - 0.1%
MgO	Magnesia	2.6 - 3.8%
CaO	Calcium	1.6 - 4.2%
Na ₂ O	Sodium	0.5 - 1.5%
K ₂ O	Potassium	2.8 - 6.5%
S	Sulfur	1.1 - 2.7%
C	Carbon	1.5 - 2.1%
CO ₃	Carbon dioxide	0.8 - 5.5%
H ₂ O	Water	0.1 - 0.3%

Coefficient of Friction				
	Dry		Wet	
Finish:	Static	Dynamic	Static	Dynamic
Sand	.69	.66	.65	.61
Cleft	.81	.79	.87	.83

Weight	
Specific Gravity	2.79 - 2.83
Mass	170 - 180 /cu. ft.
Weight @ 1" Thk.	15 lbs. / sq. ft.

Electrical Resistance
Dielectric Strength - 7,000 volts minimum for 1" Thickness.
Ohmic Resistance - 700,000 ohms/in. ³ Minimum Fresh quarried slate. 2,500,000 ohms/in. ³ - Minimum for dried slate.

Chemical Resistance		
(No reaction or penetration after 8-hour immersion in)		
70%	HNO ₃	Nitric Acid
36%	HCl	Hydrochloric acid
60%	HCIO ₄	Perchloric acid
	H ₃ PO ₄ (Conc.)	Phosphoric acid
	HC ₂ H ₃ O ₂	Acetic acid (glacial)
	H ₂ CrO ₄	Chromic acid
30%	NaOH	Sodium hydroxide
	Na ₃ PO ₄	Tri-sodium phosphate
(Some reaction and penetration after 8-hour immersion in)		
96%	H ₂ SO ₄	Sulfuric acid
48%	HF	Hydrofluoric acid

Life Expectancy
At the present time, there is no known accelerated test method for simulating the life expectancy of any natural building stone with any reasonable degree of correlation and reproducibility.

Mineral Composition	
Quartz	30.0 - 53.2%
Sericite/Illite	24.7 - 37.0%
Feldspar	0.0 - 8.3%
Pyrite	4.0 - 6.4%
Dolomite	3.7 - 5.3%
Calcite	2.0 - 10.0%

A.S.T.M. Specifications C-629 & C-406:		
C-121	Absorption (Max. %)	
	Exterior	.025%
	Interior	.045%

Chlorite	3.4 - 5.0%
Rutile	0.0 - 0.5%
Carbonaceous & Water	2.5 - 3.6%

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C-217	Acid Resistance (Weathering)	
	Exterior	.015"
	Interior	.025"
C-120	Modulus or Rupture (Min, psi)	
	(Across Grain) Exterior	9000 psi
	Interior	7200 psi
	(Along Grain) Exterior	7200 psi
	Interior	5500 psi
C-1353 / C-241	Abrasion Resistance.	8.0 min. Ha.

**** Note ****

C-1353 is a new test method of which historic values have not been established as yet. New test values may be lower than 8.0 min. Ha.