Krystal Klear® Performance Data

Common Physical Properties

Nominal Thickness	Width	Length	Area (Sq. Ft.)	Approx. Weight Per Square Foot	Approx. Weight Per Square Meter	Approx. Solar Energy Transmitted
1/8"	96"	130"	48	1.6	3 mm = 7.8 kg	91.0%*
5/32"	96"	130"	48	2.0	4 mm = 9.7 kg	90.7%
3/16"	96"	130"	48	2.4	5 mm = 11.7 kg	90.4%
1/4"	96"	130"	48	2.9	6 mm = 14.2 kg	91.0%

*ASTM E 424-71 (Reapproved 1993)

Thermal Properties*

Hemispherical Emissivity at 0° -150° (-18° - 66°C)	0.84
Expansion Coefficient (Linear in the range of 25°C to 300°C)	per °C = 9.03 x 10^{-6} per °F = 5.02 x 10^{-6}
Specific Heat at 32° - 212°F (0° - 100°C)	0.2
Calculated Thermal Conductivity at 20°C in (watt/m^2/K)	1.04
Softening Point	1332°F 722°C
Annealing Point	1025°F 552°C
Strain Point	932°F 500°C

Mechanical Properties*

Hardness: Moh's Scale (Scratch hardness) (Diamond = 10,Sapphire = 9, etc.) Knopp Hardness Number (indentation hardness) indenter load - 500 grams	~6 470
Poisson's Ratio	0.22
Density	156 lb/cf 2.5 g/cc
(Young's) Modulus of Elasticity	10,600,000 psi 73.1 GPa
Tensile Strength (determined as Modulus of Rupture, ultimate)	6000 lb/in2 41.4 MPa
Specific Gravity at 70°F (21°C)	2.5

Chemical Properties*

Approximate Chemical Composition:	
Silicon Dioxide	73%
Sodium Oxide	14%
Calcium Oxide	8.7%
Magnesium Oxide	3.9%
Trace Elements	0.4%

*Thermal, Mechanical, and Chemical properties applicable to test samples under specific testing conditions.

Spectral Data 3MM

Wave Length	Clear	Krystal Klear
300	2.90	3.42
310	1.06	3.82
320	11.67	4.62
330	37.03	11.10
340	62.50	35.17
350	78.74	66.61
360	85.17	81.22
370	87.27	86.65
380	86.74	88.73
390	88.64	89.84
410	89.77	90.72
430	89.40	90.90
450	89.70	91.09
470	90.41	91.22
490	90.16	91.23
510	90.79	91.30
530	90.58	91.38
550	90.40	91.43
570	90.04	91.46
590	89.75	91.47
610	89.33	91.43
630	88.87	91.52
650	88.17	91.50
670	86.77	91.49
690	86.32	91.41
710	85.56	91.39
730	84.84	91.49
750	83.94	91.30
770	83.06	91.20
800	81.69	91.29
850	80.67	91.17
900	79.57	91.49
950	78.90	91.29
1000	78.22	91.36
1050	77.84	91.32
1100	77.90	91.41
1150	78.16	91.31
1200	78.49	91.31
1250	78.71	91.55
1300	79.62	91.45
1350	80.14	91.49
1400	81.11	91.68
1450	82.48	91.68
1500	83.49	91.90
1550	84.44	91.63
1600	85.01	91.68
1650	85.55	91.60
1700	85.53	91.73
1750	85.64	91.68
1800	85.39	91.72
1850	85.37	91.70
1900	84.87	91.65
1950	85.04	91.63

AFG Industries, Inc. 1400 Lincoln Street Kingsport, TN 37660 www.afgglass.com
U.S. (800) 251-0441 (423) 229-7200 or Canada (800) 463-3885