

PRODUCT DESCRIPTION

Graylite® II glass by Vitro Architectural Glass is a soda-lime float glass product. With its bold, almost-black look, Graylite® II glass is the solution for applications requiring reduced solar heat gain and a specific aesthetic objective. Graylite® II glass combines superior heat-load reduction and solar control with a distinctive color contrast. Its shading coefficient is among the lowest of any uncoated glass: 0.35 for a 1-inch IGU. Daylight transmittance is 8 percent, making it ideal for glare control and privacy glazing.

APPROXIMATE WEIGHTS

Per m ²		Per ft ²	
thickness	weight	thickness	weight
3.0 mm	8.2 kg	1/8	1.5 lbs
4.0 mm	9.9 kg	5/32	2.0 lbs
6.0 mm	14.2 kg	1/4	2.9 lbs

MECHANICAL PROPERTIES

Knoop Hardness Number (indentation hardness) indenter load--500 gm	470 kgf/mm ²	
Poisson's Ratio	0.22	
Modulus of Elasticity (Young's)	73.1 GPa	10,600,000 psi
Tensile Strength (Determined as Modulus of Rupture, ultimate)	41.4 MPa	6,000 psi
Density at 21°C (70°F)	2.51 g/cm ³	157 lb/ft ³

COLOR

	6.0mm
Transmitted Color: D65, 10° L*	35.8
a*	-0.5
b*	-0.3
Hue Angle (°)	213
Dominant wavelength: C, 2°	503 nm

THERMAL PROPERTIES

Hemispherical Emissivity at -18 to 66 °C (0 to 150°F) glass / coating	0.84 / 0.14	
Expansion Coefficient (linear) 20 to 300°C (68 to 572°F)	8.6*10 ⁻⁶ / °C	4.8*10 ⁻⁶ / °F
Specific heat at 0 to 100°C (32 to 212°F)	858 J/kg-K	0.205 Btu/lb-°F
Thermal Conductivity (k) at 50°C (122°F)	0.937 W/m-K	0.542 Btu/hr-ft-°F
Softening Point	722°C	1332°F
Annealing Point	540°C	1004°F
Strain Point	510°C	950°F

CHEMICAL COMPOSITION

SiO ₂	73%
Na ₂ O	14%
CaO	9%
MgO and Trace elements	4%

SUSTAINABILITY

To provide architects with the assurance and documentation they need to meet and verify their sustainability goals, Vitro Architectural Glass participates in a range of programs and initiatives. Resources available include, but are not limited to:

- Type III Environmental Product Declarations
- Cradle to Cradle Certified™ Bronze with associated Gold Material Health Certificate
- LEED® and Living Building Challenge documentation
- Material Ingredient Disclosure and Safety Data Sheets
- Annual Corporate Sustainability Report

Further information is available through VitroGlazings.com or by calling 855-887-6457 (VTRO GLS)



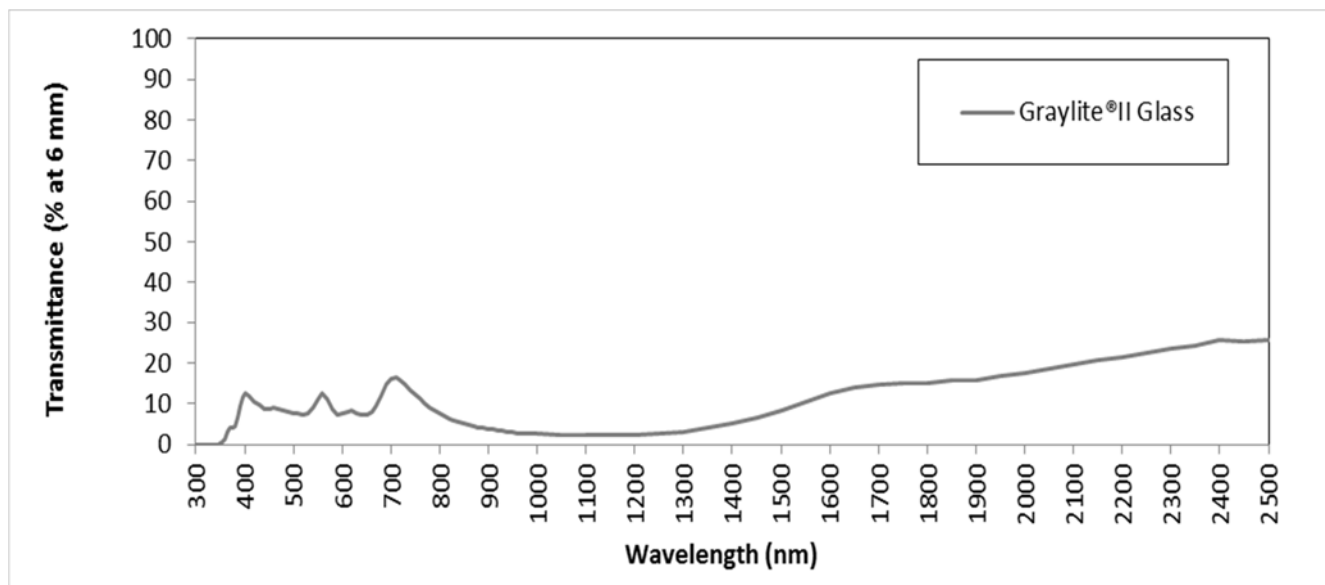
SOLAR PERFORMANCE VALUES ^[1]

Glass Thickness		Transmittance				Reflectance	
inches	mm	Ultra-violet (%)	Visible (%)	Infrared (%)	Total Solar (%)	Visible (%)	Total Solar (%)
1/8	3.0	8	24	18	22	5	4
5/32	4.0	5	18	14	17	4	4
1/4	6.0	2	9	6	8	4	4

^[1] Figures may vary due to manufacturing tolerances. All tabulated solar performance data are based on the methodology prescribed in ISO 9050, 2003 except Infrared, which is based on the solar irradiance data prescribed by ISO 9050, 2003 from 780 to 2500 nm. Slight changes in transmitted optical properties may occur on exposure to sunlight.

Transmittance (% at 6 mm/0.223")

Wavelength (nm)	Graylite® II Glass %T	Wavelength (nm)	Graylite® II Glass %T	Wavelength (nm)	Graylite® II Glass %T	Wavelength (nm)	Graylite® II Glass %T	Wavelength (nm)	Graylite® II Glass %T
300	0.0	430	9.6	660	7.8	890	4.0	1600	12.5
305	0.0	440	8.8	670	9.4	900	3.8	1650	13.9
310	0.0	450	8.8	680	11.9	910	3.6	1700	14.7
315	0.0	460	9.0	690	14.6	920	3.4	1750	15.0
320	0.0	470	8.7	700	16.2	930	3.2	1800	15.2
325	0.0	480	8.3	710	16.3	940	3.1	1850	15.6
330	0.0	490	7.8	720	15.7	950	3.0	1900	15.7
335	0.0	500	7.7	730	14.6	960	2.9	1950	16.7
340	0.0	510	7.5	740	13.4	970	2.8	2000	17.5
345	0.0	520	7.4	750	12.2	980	2.7	2050	18.5
350	0.0	530	7.7	760	11.1	990	2.6	2100	19.5
355	0.4	540	9.0	770	10.1	1000	2.6	2150	20.8
360	1.4	550	11.3	780	9.1	1050	2.4	2200	21.5
365	3.0	560	12.4	790	8.3	1100	2.3	2250	22.4
370	4.3	570	11.1	800	7.6	1150	2.2	2300	23.5
375	4.2	580	8.6	810	7.0	1200	2.3	2350	24.2
380	4.4	590	7.1	820	6.4	1250	2.6	2400	25.6
385	6.6	600	7.5	830	5.9	1300	3.1	2450	25.4
390	9.5	610	8.0	840	5.4	1350	4.1	2500	25.5
395	11.5	620	8.2	850	5.1	1400	5.1		
400	12.4	630	7.8	860	4.6	1450	6.5		
410	11.7	640	7.2	870	4.4	1500	8.4		
420	10.5	650	7.2	880	4.1	1550	10.5		



ADDITIONAL INFORMATION/DOCUMENTS

The following documents can be referenced for additional information regarding Graylite® II glass;

Graylite® II Performance Data, Vitro Float Glass Warranty, Vitro Float Glass SDS, C2C Material Health Certificate, Vitro Float Glass EPD