

PRODUCT DESCRIPTION

Acuity™ glass is a low-iron glass providing high visible light transmittance and true-to-life color rendition for vision glazing and spandrel glass applications. Designed to eliminate the green hue of clear glass, Acuity™ glass delivers enhanced clarity and is available with the full range of Solarban® solar control low-e glass coatings.

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 |
| 5.0 mm | 11.9 kg | 3/16 | 2.4 lbs |
| 6.0 mm | 14.2 kg | 1/4 | 2.9 lbs |
| 8.0 mm | 19.8 kg | 5/16 | 4.1 lbs |
| 10.0 mm | 23.8 kg | 3/8 | 4.9 lbs |
| 12.0 mm | 31.8 kg | 1/2 | 6.5 lbs |
| 16.0 mm | 41.0 kg | 5/8 | 8.0 lbs |
| 19.0 mm | 50.9 kg | 3/4 | 10.0 lbs |

COLOR

| | 6.0 mm |
|--------------------------------|--------|
| Transmitted Color: D65, 10° L* | 96.2 |
| a* | -0.7 |
| b* | 0.0 |
| Hue Angle (°) | 179 |
| Dominant wavelength: C, 2° | 494 nm |

CHEMICAL COMPOSITION

| | |
|------------------------|-----|
| SiO ₂ | 73% |
| Na ₂ O | 14% |
| CaO | 10% |
| MgO and Trace elements | 3% |

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) | 2.50 g/cm ³ | 156 lb/ft ³ |

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) | 8.7*10 ⁻⁶ / °C | 4.9*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) | 1.00 W/m-K | 0.58 Btu/hr-ft-°F |
| Softening Point | 721°C | 1329°F |
| Annealing Point | 545°C | 1014°F |
| Strain Point | 509°C | 949°F |

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:

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)



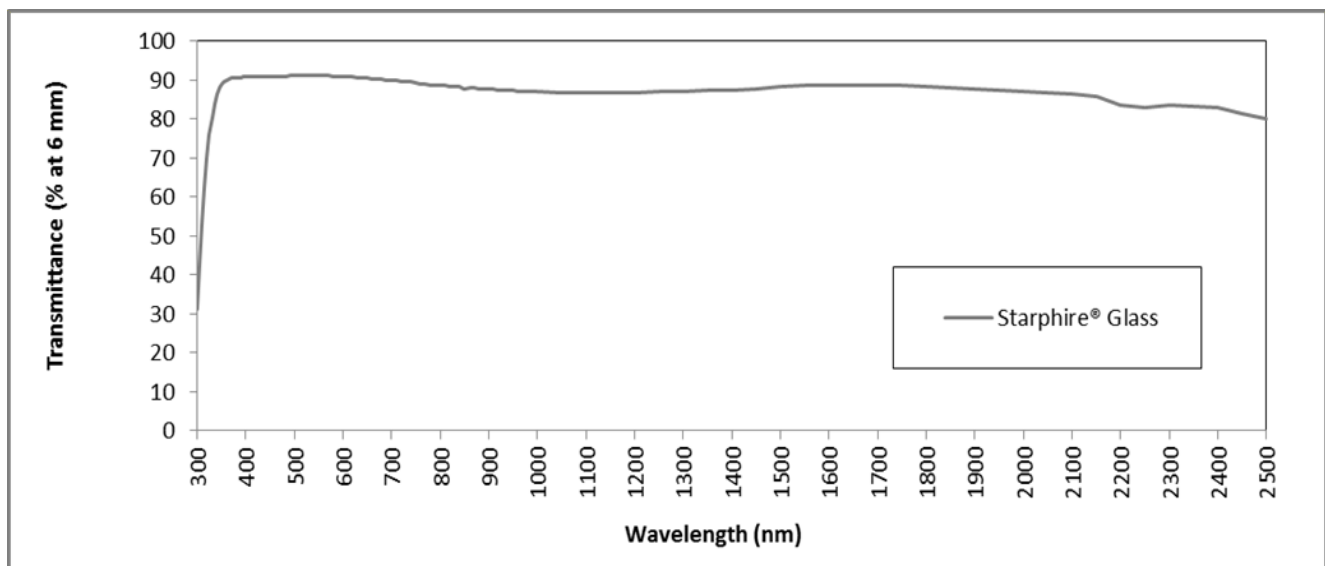
SOLAR PERFORMANCE VALUES ^[1]

| Glass Thickness | | Transmittance | | | | Reflectance | |
|-----------------|------|------------------|-------------|--------------|-----------------|-------------|-----------------|
| inches | mm | Ultra-violet (%) | Visible (%) | Infrared (%) | Total Solar (%) | Visible (%) | Total Solar (%) |
| 1/8 | 3.2 | 89 | 91 | 89 | 90 | 8 | 8 |
| 5/32 | 4.0 | 88 | 91 | 89 | 90 | 8 | 8 |
| 3/16 | 5.0 | 88 | 91 | 88 | 90 | 8 | 8 |
| 1/4 | 6.0 | 87 | 91 | 87 | 89 | 8 | 8 |
| 5/16 | 8.0 | 86 | 91 | 86 | 88 | 8 | 8 |
| 3/8 | 10.0 | 85 | 91 | 84 | 87 | 8 | 8 |
| 1/2 | 12.0 | 83 | 90 | 82 | 86 | 8 | 8 |
| 5/8 | 16.0 | 81 | 90 | 80 | 84 | 8 | 8 |
| 3/4 | 19.0 | 80 | 90 | 78 | 83 | 8 | 7 |

^[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) | Starphire® Glass %T | Wavelength (nm) | Starphire® Glass %T | Wavelength (nm) | Starphire® Glass %T | Wavelength (nm) | Starphire® Glass %T | Wavelength (nm) | Starphire® Glass %T |
|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|
| 300 | 31.4 | 430 | 90.9 | 660 | 90.4 | 890 | 87.8 | 1600 | 88.8 |
| 305 | 42.8 | 440 | 90.9 | 670 | 90.3 | 900 | 87.7 | 1650 | 88.9 |
| 310 | 53.1 | 450 | 90.9 | 680 | 90.2 | 910 | 87.6 | 1700 | 88.8 |
| 315 | 62.2 | 460 | 91.0 | 690 | 90.1 | 920 | 87.5 | 1750 | 88.6 |
| 320 | 69.9 | 470 | 91.0 | 700 | 89.9 | 930 | 87.5 | 1800 | 88.3 |
| 325 | 75.9 | 480 | 91.1 | 710 | 89.9 | 940 | 87.4 | 1850 | 88.0 |
| 330 | 80.6 | 490 | 91.1 | 720 | 89.7 | 950 | 87.3 | 1900 | 87.7 |
| 335 | 84.0 | 500 | 91.2 | 730 | 89.6 | 960 | 87.3 | 1950 | 87.5 |
| 340 | 86.4 | 510 | 91.2 | 740 | 89.5 | 970 | 87.2 | 2000 | 87.1 |
| 345 | 88.0 | 520 | 91.2 | 750 | 89.3 | 980 | 87.2 | 2050 | 86.8 |
| 350 | 89.0 | 530 | 91.2 | 760 | 89.2 | 990 | 87.1 | 2100 | 86.5 |
| 355 | 89.7 | 540 | 91.2 | 770 | 89.1 | 1000 | 87.1 | 2150 | 85.8 |
| 360 | 90.1 | 550 | 91.2 | 780 | 88.9 | 1050 | 86.9 | 2200 | 83.7 |
| 365 | 90.4 | 560 | 91.2 | 790 | 88.8 | 1100 | 86.8 | 2250 | 83.0 |
| 370 | 90.5 | 570 | 91.2 | 800 | 88.7 | 1150 | 86.8 | 2300 | 83.6 |
| 375 | 90.6 | 580 | 91.1 | 810 | 88.6 | 1200 | 86.9 | 2350 | 83.5 |
| 380 | 90.6 | 590 | 91.0 | 820 | 88.4 | 1250 | 87.0 | 2400 | 83.0 |
| 385 | 90.7 | 600 | 91.0 | 830 | 88.4 | 1300 | 87.2 | 2450 | 81.3 |
| 390 | 90.8 | 610 | 90.9 | 840 | 88.3 | 1350 | 87.4 | 2500 | 80.1 |
| 395 | 90.8 | 620 | 90.8 | 850 | 87.9 | 1400 | 87.4 | | |
| 400 | 90.8 | 630 | 90.7 | 860 | 88.0 | 1450 | 87.8 | | |
| 410 | 90.8 | 640 | 90.6 | 870 | 88.0 | 1500 | 88.3 | | |
| 420 | 90.8 | 650 | 90.5 | 880 | 87.9 | 1550 | 88.6 | | |



ADDITIONAL INFORMATION/DOCUMENTS

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

Starphire® Performance Data, Starphire® Edge Color Brochure, Vitro Float Glass Warranty, Vitro Float Glass SDS, C2C Material Health Certificate, Vitro Float Glass EPD