PRODUCT DESCRIPTION

Solarcool® Azuria® coated glass by Vitro Architectural Glass is a aqua-blue tinted float glass with a durable, light and heat reflective, metallic oxide coating applied during the float process. The reflective coating side of the glass can be glazed on either the first or second surface. On the first surface, it creates a bright metallic appearance and mutes the aqua-blue tinted glass substrate color. On the second surface, it adds reflectivity and deepens the hue of the aqua-blue tinted glass substrate.

APPROXIMATE WEIGHTS

Per m^2		Per ft^2	
thickness	**weight**	**thickness**	**weight**
6.0 mm	14.2 kg	¼	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*	66.7
a*	-2.8
b*	4.7
Hue Angle (°)	121.3
Dominant wavelength: C, 2°	564.1 nm

THERMAL PROPERTIES

Hemispherical Emissivity at -18 to 66 °C (0 to 150°F)) glass / coating	0.84 / 0.84	
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)	0.937 W/m-K	0.542 Btu/hr-ft-°F
Softening Point	720°C	1328°F
Annealing Point	548°C	1019°F
Strain Point	508°C	947°F

CHEMICAL COMPOSITION

SiO_2	73%
Na_2O	14%
CaO	10%
MgO and Trace elements	3%

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)

HEAT TREATMENT GUIDELINES

The coating on *Solarcool® Azuria®* glass is permanent, allowing the glass to be heat treated to satisfy increased strength or safety glazing requirements. While heat treating *Solarcool® Azuria®* coated glass, face the coating away from the furnace rolls to reduce the risk of introducing scratches to the coated surface. Process the glass the same as uncoated glass. The coating on *Solarcool® Azuria®* does not appreciably reflect furnace heat since the coating emissivity is essentially the same as uncoated glass. Glass heat-up time will remain nearly identical as for the same uncoated *Azuria®* tinted glass. **Turn off SO_2 in the furnace.** SO_2 may cause an appreciable loss in durability of the *Solarcool®* coating. Degradation is the result of the SO_2 reducing the atmosphere causing potential damage to the coating.

SOLAR PERFORMANCE VALUES COATED SURFACE [1]

Glass Thickness		Transmittance				Reflectance	
inches	**mm**	**Ultra-violet (%)**	**Visible (%)**	**Infrared (%)**	**Total Solar (%)**	**Visible (%)**	**Total Solar (%)**
¼	6.0	12	26	6	13	36	30

[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 to2500 nm. Slight changes in transmitted optical properties may occur on exposure to sunlight.

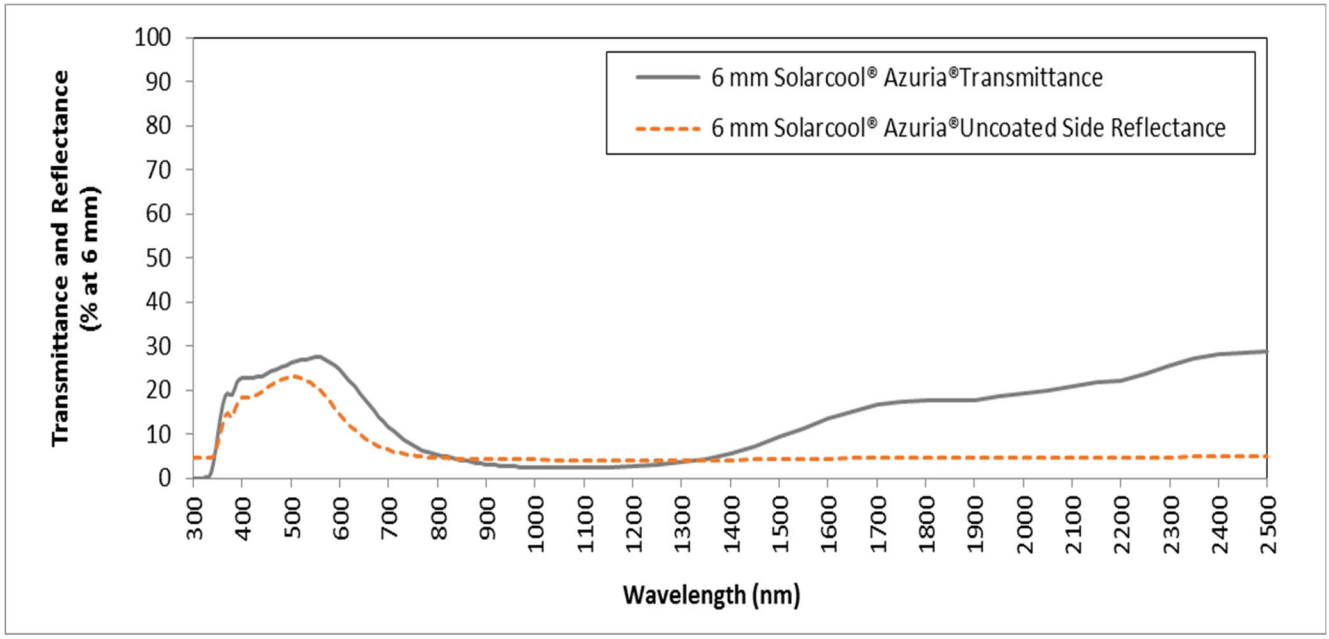
Vitro Architectural Glass
Glass Technology Center
400 Guys Run Rd. Pittsburgh, PA 15024

VitroGlazings.com
archservices@vitroglazings.com

1.855.887.6457 / 1.855.VTRO.GLS

6 mm Solarcool® Azuria® Transmittance and Uncoated Side Reflectance (% at 6 mm/0.223")

Wavelength (nm)	%T	%R	Wavelength (nm)	%T	%R	Wavelength (nm)	%T	%R	Wavelength (nm)	%T	%R	Wavelength (nm)	%T	%R
300	0.0	4.7	430	22.9	19.0	660	16.5	8.4	890	3.3	4.2	1600	13.4	4.4
305	0.0	4.7	440	23.1	19.4	670	15.3	7.8	900	3.1	4.2	1650	15.2	4.6
310	0.0	4.7	450	23.6	20.4	680	14.0	7.2	910	3.0	4.2	1700	16.7	4.6
315	0.0	4.7	460	24.2	21.3	690	12.8	6.8	920	2.9	4.2	1750	17.4	4.6
320	0.0	4.7	470	24.7	21.9	700	11.6	6.4	930	2.8	4.2	1800	17.6	4.6
325	0.0	4.6	480	25.1	22.4	710	10.6	6.0	940	2.7	4.2	1850	17.7	4.5
330	0.2	4.6	490	25.6	22.8	720	9.7	5.8	950	2.6	4.2	1900	17.7	4.5
335	1.2	4.7	500	26.1	23.0	730	8.8	5.5	960	2.6	4.2	1950	18.5	4.5
340	3.3	5.0	510	26.5	23.0	740	8.1	5.3	970	2.5	4.2	2000	19.2	4.5
345	6.6	6.2	520	26.8	22.6	750	7.4	5.1	980	2.5	4.2	2050	19.9	4.5
350	10.3	8.0	530	27.0	22.1	760	6.8	5.0	990	2.5	4.2	2100	20.9	4.6
355	13.8	10.2	540	27.3	21.7	770	6.3	4.9	1000	2.4	4.2	2150	21.6	4.6
360	16.5	12.3	550	27.5	20.9	780	5.9	4.7	1050	2.4	4.1	2200	22.1	4.6
365	18.4	14.0	560	27.4	20.0	790	5.6	4.7	1100	2.4	4.1	2250	23.7	4.6
370	19.4	14.7	570	27.0	18.6	800	5.3	4.6	1150	2.5	4.1	2300	25.6	4.7
375	18.9	14.1	580	26.3	17.2	810	5.1	4.5	1200	2.7	4.1	2350	27.0	4.8
380	18.8	14.0	590	25.4	15.7	820	4.9	4.5	1250	3.0	4.1	2400	28.0	4.8
385	20.2	15.3	600	24.5	14.4	830	4.7	4.4	1300	3.5	4.1	2450	28.3	4.9
390	21.6	16.8	610	23.5	13.2	840	4.4	4.4	1350	4.4	4.1	2500	28.7	4.9
395	22.4	17.7	620	22.2	12.0	850	4.1	4.3	1400	5.6	4.1			
400	22.8	18.2	630	20.7	10.8	860	3.9	4.3	1450	7.3	4.2			
410	22.9	18.4	640	19.3	9.9	870	3.7	4.3	1500	9.4	4.2			
420	22.8	18.7	650	17.9	9.1	880	3.5	4.3	1550	11.4	4.3			



CLEANING AND COATING CARE RECOMMENDATIONS

1. Solarcool® coated glass can be cleaned following normal commercial glass cleaning practices. It should be washed periodically using soft, grit-free cloths and mild soap or detergents; **acidic cleaning solutions, fluoride salts, hydrogen producing compounds, and abrasive cleaners should not be used**.
2. Immediately after washing, the entire surface should be rinsed with clean water, and a soft smooth squeegee used to remove excess rinse water. If it is necessary to use commercial solvents, such as xylene, toluene, mineral spirits, or naptha, to remove grease or glazing compounds, the glass should be washed and rinsed afterward. Care should be taken to protect glazing sealants and other materials when using these commercial solvents.
3. If an installation positions the Solarcool® coated glass near or below weather exposed concrete or masonry surfaces, it should be washed more frequently to remove deposits that may reside on the glass. Some glazing sealants may exude, bleed, or leach onto the glass surface. If sealant-type contaminates are not removed in a timely manner, it could lead to a residue that is very difficult to remove or a permanent stain.
4. The Solarcool® coating is a durable metallic oxide coating that requires no different cleaning care than standard accepted practices for normal float glass. However, because the coated surface is more reflective than ordinary uncoated glass, fingerprints, grease stains, smears, dirt, scum and scratches/abrasions (on either surface) may be more noticeable. Cleaning schedules may need to be altered to accommodate this condition.
5. Solarcool® coated glass that is glazed with the coating exposed to the outdoors should be cleaned more frequently (a minimum of 3 to 4 times per year). Materials, such as rundown from metals and masonry, such as concrete, stucco, etc. should be cleaned from the glass as soon as they occur so that they are not permitted a long residence time on the coated glass surface. If such rundown is not quickly removed, permanent staining and/or glass damage may occur.

For more information related to cleaning instructions, please see Vitro Technical Documents, TD-107 *Residue on Glass* and TD-142 *Glass Cleaning Recommendations* available on the Vitro website at http://www.vitroglazings.com.

ADDITIONAL INFORMATION/DOCUMENTS

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

Solarcool® Azuria® Performance Data, Vitro Solarcool® Coated Glass Warranty, Vitro Pyrolytic Coated Glass SDS, C2C Material Health Certificate, Vitro Processed Glass EPD