

TECHNICAL INFORMATION

ACRYLITE® Soundstop XT with Bird Guard Noise Barrier Sheet

Transparent Noise Barriers

Product

ACRYLITE® Soundstop XT with Bird Guard protection is a highly transparent specialty grade of acrylic that helps to prevent bird collisions.

Properties

In addition to the well-known and proven properties of standard ACRYLITE® acrylic sheet such as:

- Excellent light transmission and brilliance
- Extremely high weather resistance
- High surface hardness
- Lightweight – half the weight of glass
- 11 times the impact strength of glass

ACRYLITE® Soundstop XT with Bird Guard offers the following special features:

- Many traditional sound barriers create a tunnel effect when driving, but the transparency of ACRYLITE® Soundstop XT with Bird Guard allows for more comfortable driving conditions.
- ACRYLITE® Soundstop XT with Bird Guard offers a superior sound reduction rating (STC) of 32 dB or higher by ASTM E90.
- Large noise barrier panels reduce the need for steel supporting structures and enhance the transparency of the noise barrier.
- ACRYLITE® Soundstop XT with Bird Guard is available in colorless sheet as well as various transparent colors.
- Embedded stripes reduce the likelihood of bird collisions.

Machining

ACRYLITE® Soundstop XT with Bird Guard can be machined like standard ACRYLITE® acrylic sheet.

Applications

These properties make ACRYLITE® Soundstop XT with Bird Guard especially suitable for:

- Noise control on highway and railways
- Wind barriers on bridges
- Impact resistant glazing for pedestrian bridges and trails/greenways

Product Offering

ACRYLITE® Soundstop XT with Bird Guard is available in the following sizes, thicknesses, and Bird Stripe orientation. Black stripes are 2mm wide with a 30mm spacing and white stripes are 20mm wide with a 100mm spacing.

Width: up to 79" wide (2.0 m)

Length: up to 19.5 ft long (6.0 m)

Thicknesses: 12, 15, 20, 25 mm

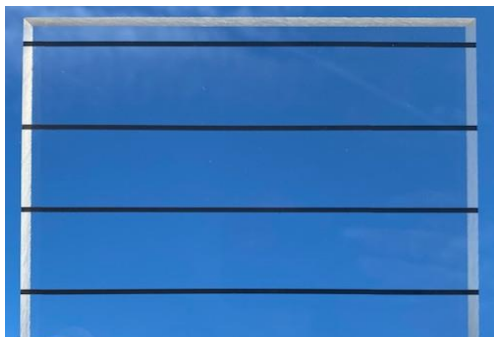
Stripe Direction: (-XLA) black stripes along length
(-XLD) black stripes along width
(-XLW) white stripes along length



ACRYLITE® Soundstop XT with Bird Guard on Esplanade Ave in North Vancouver, BC, Canada

Typical Values – ACRYLITE® Soundstop XT with Bird Guard

Physical Properties	Test Standard	ACRYLITE® Soundstop XT w/BG (a) (b)
Mechanical		
Specific Gravity	ASTM D792	1.19
Tensile Strength		10,000 psi (69 MPa)
Elongation at Break (%)	ASTM D638	4.1%
Modulus of Elasticity		450,000 psi (3100 MPa)
Flexural Strength		15,800 psi (109 MPa)
Flexural Strain at Break (%)	ASTM D790	4.0%
Modulus of Elasticity		470,000 psi (3240 MPa)
Compressive Strength (Yield)	ASTM D695	17,000 psi (117 MPa)
Impact by Windborne Debris in Hurricanes (>15mm)	ASTM E1996	Pass
Optical (Colorless)		
Refractive Index	ASTM D542	1.49
Initial Light Transmission		92%
15 years natural outdoor weathering	ASTM D1003	92%
Initial Haze		1.0%
15 years natural outdoor weathering	ASTM D1003	4.2%
Initial Yellowness Index		<1.0
15 years natural outdoor weathering	ASTM E313	<1.0
Thermal		
Resistance to Brushfire (> 12 mm)	EN 1794-2, Annex A	Pass
Coefficient of Linear Expansion	ASTM D696	0.000040 in/in/°F (0.072 mm/m °C)
Flammability, Burning Rate (12 mm thickness and greater)	ASTM D635	0.70 in/min (17.8 mm/min) – CC2
Self-Ignition Temperature	ASTM D1929	860°F (460°C)
Smoke Density Rating (12 mm thickness and greater)	ASTM D2843	0.5%
Sound Transmission		
Sound Transmission Class (STC)	ASTM E90	15 mm = 32 dB 20 mm = 34 dB 25 mm = 36 dB
	15 mm Thickness	3.66 lb/ft ² (17.9 kg/m ²)
	20 mm Thickness	4.86 lb/ft ² (23.8 kg/m ²)
	25 mm Thickness	6.1 lb/ft ² (29.8 kg/m ²)
Weight per Square Foot		
(a) Typical values: should not be used for specification purposes.		
(b) Values shown are for 0.250" (6 mm) thickness unless noted otherwise. Some values will change with thickness.		



ACRYLITE® Soundstop XT with Bird Guard
(black stripes)



ACRYLITE® Soundstop XT with Bird Guard
(white stripes)