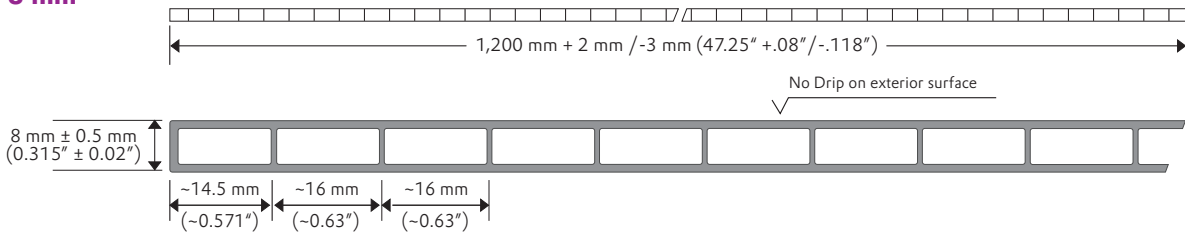


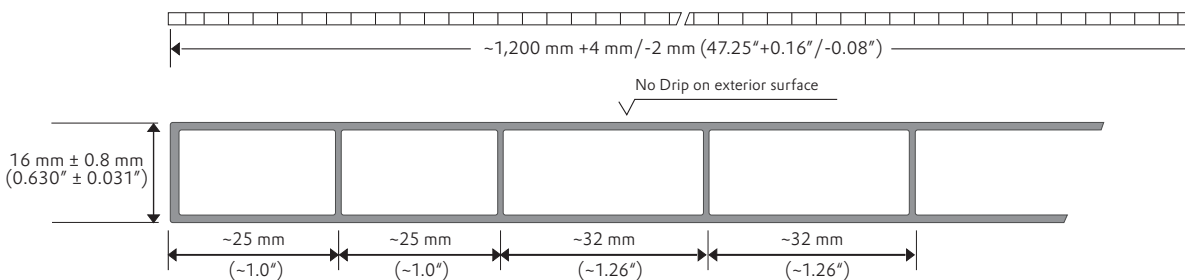
Technical Information

# 8 mm & 16 mm ACRYLITE® Resist high impact acrylic double-skin sheet

## 8 mm



## 16 mm



### ACRYLITE® RESIST HIGH IMPACT ACRYLIC

**DOUBLE-SKIN SHEET** is light transmitting, heat-insulating and highly weather-resistant sheet made of impact-modified Acrylic (polymethyl methacrylate, PMMA) polymer.

### ACRYLITE® RESIST HIGH IMPACT ACRYLIC

**DOUBLE-SKIN SHEET** is suitable for sloped, curved and vertical applications including the following:

- Canopies
- Clerestory Glazing
- Interior Walls
- Interior Partitions
- Lighting Panels
- Skylights
- Barrel Vaults
- Façades & Cladding
- Pool Enclosures
- Retail Greenhouses

### ADVANTAGES OF ACRYLITE® RESIST HIGH IMPACT ACRYLIC DOUBLE-SKIN SHEET

- Extraordinary clear sheet is UV-resistant and includes a 30-year warranty against yellowing.

- Impact resistance during transportation, handling and installation.
- Hail-resistant with a 10-year guarantee for withstanding hailstones with a kinetic energy of 1 joule.
- Up to 50% energy savings and minimizes CO<sup>2</sup> emissions\*.
- High light transmission in the PAR and visible spectral energy wavelengths.
- Available in clear and various colors.
- Available with smooth or diffuse surface
- Available as UV transmitting or UV blocking material

### WARRANTIES

Non-prorated, full replacement 30 year non-yellowing, 10 year light transmission and 10 year hail warranties. For details see warranty.

\* varies by product and geometry

## TECHNICAL DATA (TYPICAL VALUES)

	Light Transmittance D65	Total Energy Transmission Values	Shading Coefficient (SC)
Clear 8 mm (ORS72)	84%	82%	0.94
Clear 8 mm UVT (ORS08)	84%	82%	0.94
Clear 16 mm Smooth (ORS06)	86%	82%	0.94
Clear 16 mm Diffuse (ORS07)	84%	80%	0.92
Light White 16 mm (WRS09)	74%	73%	0.83
Solar White 16 mm (WRS17)	37%	46%	0.53
Bronze 16 mm (8RS02)	53%	64%	0.75
	<b>8 mm</b>		<b>16 mm</b>
UV Transmitting	blocking		blocking
U-value	3.4 W/m <sup>2</sup> K (0.56 BTU/hr•ft <sup>2</sup> •°F)		2.5 W/m <sup>2</sup> K (0.49 BTU/hr•ft <sup>2</sup> •°F)
R-value	1.78 °F/BTU•hr•ft <sup>2</sup>		2.04 °F/BTU•hr•ft <sup>2</sup>
Coefficient of Heat Expansion (α)	0.09 mm/m °C (0.00005 in/in/°F)		0.09 mm/m °C (0.00005 in/in/°F)
Expansion Due to Heat and Moisture	6 mm/m (1/16" /ft)		6 mm/m (1/16" /ft)
Approximate Area Weight	3.4 Kg/m <sup>2</sup> (0.7 lb/ft <sup>2</sup> )		4.6 Kg/m <sup>2</sup> (~1 lb/ft <sup>2</sup> )
Thickness	8 mm (5/16")		16 mm (5/8")
Rib Spacing	16 mm (5/8")		32 mm (1 1/4")
Width	1200 mm (47 1/4")		1200 mm (47 1/4")
Length	up to 10973 mm (36 ft)		up to 10973 mm (36 ft)
Weighted Sound Reduction Index	23 dB		24 dB
Maximum Service Temperature	70°C (160 °F)		70°C (160 °F)
ASTM D-635 (Rate of Burn)	C2 / CC2		C2 / CC2
ASTM D-1929 (Self Ignition Temp)	830 °F		830 °F
ASTM D-2843 (Smoke Density Rating)	8.1 %		7.0 %
CAN/ULC S102.2	< 150 Flame Spread Classification		< 150 Flame Spread Classification
DIN 4102	normal combustability, B2 Minimum permissible cold-forming radius of 48" (150 x thickness)		normal combustability, B2 Minimum permissible cold-forming radius of 96" (150 x thickness)

Values are approximate.

## ENVIRONMENTAL SUSTAINABILITY

### ACRYLITE® RESIST HIGH IMPACT ACRYLIC

**DOUBLE-SKIN SHEET**s' natural heat insulating qualities can translate into significant energy savings, making them an ideal choice for eco-lighting and building green. The sheets are built to last using environmentally sound manufacturing processes in facilities that have received ISO-14001 environmental certification. In addition, if the time does come for replacement, ACRYLITE® can be recycled in an environmentally friendly manner.

## NO DRIP

The water-dispersing, patented No Drip coating applied on one side of the sheet causes any surface water to form a thin, continuous film. When the sheet is installed with the No Drip coating on the outside of the roof, the coating can support the natural cleaning of the roof by rainwater. When the coating is on the inside, it contributes toward preventing any condensed water from forming droops and thus averts the damage caused by condensation.

### FIRE BEHAVIOR

The fire behavior of ACRYLITE® is rated as C2 or CC2 according to ASTM D-635. ACRYLITE® burns almost entirely without smoke according to DIN4102 and ASTM D-2843 and is easily extinguished. The smoke gases produced by ACRYLITE® are neither acutely toxic according to DIN 53436, nor corrosive according to DIN VDE 0482-267.

### LOAD BEARING CAPACITY

Due to its excellent rigidity, large areas can be glazed quickly and efficiently. Few intermediate supports are required to carry substantial uniformly distributed loads (refer to Support Spacing chart). Reduction of structural members means less shading thus increasing light levels.

### 8 mm SUPPORT SPACING

As a flat glazing supported on all sides, 1200 mm wide 8 mm double-skin sheet requires crosswise supports spaced at 106" (2.7 m) for uniformly distributed loads up to 15.7 lb/ft<sup>2</sup> (750 N/m<sup>2</sup>). For greater loads, the recommended spacing is given in the Support Spacing Chart.

### 8 mm SUPPORT SPACING CHART

**8 mm ACRYLITE® RESIST HIGH IMPACT ACRYLIC DOUBLE-SKIN SHEET** width as delivered 1200 mm (47 1/4")

Load		Support Spacing	
[N/m <sup>2</sup> ]	(lb/ft <sup>2</sup> )	[m]	(in)
750	15.7	2.7	106
1000	20.9	2.2	86
1250	26.1	1.9	74
1500	31.3	1.7	66
1750	35.5	1.6	63
2000	41.8	1.5	59

### 16 mm SUPPORT SPACING

As a flat glazing supported on all sides, 1200 mm wide 16 mm double-skin sheet requires no additional cross members for uniformly distributed loads up to 15.7 lb/ft<sup>2</sup> (750 N/m<sup>2</sup>). For greater loads, the recommended spacing is given in the Support Spacing Chart.

### 16 mm SUPPORT SPACING CHART

**16 mm ACRYLITE® RESIST HIGH IMPACT ACRYLIC DOUBLE-SKIN SHEET**

width as delivered 1200 mm (47 1/4")		width as delivered 600 mm (23 5/8")		
Load		Support Spacing		Support Spacing
[N/m <sup>2</sup> ]	(lb/ft <sup>2</sup> )	[m]	(in)	[m] (in)
750	15.7	Not required		Not required
1000	20.9	6.0	236	Not required
1250	26.1	4.0	157	Not required
1500	31.3	3.8	150	Not required
1750	35.5	3.4	134	Not required
2000	41.8	3.1	122	Not required
2250	47	2.9	114	Not required
2500	52.2	2.7	106	Not required
2750	57.4	2.5	98	Not required
3000	62.6	2.3	91	5.5 217

Maximum allowable spacing is in the direction parallel to the sheet's ribs. Refer to local building codes to determine the applicability of these values to specific applications. Building codes will indicate the design loads to be used to determine the maximum span lengths or support spacing.

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