



Product Data Sheet

Lexan® Exell® D ST Sheet

Description

Lexan® Exell® D ST sheet is a textured polycarbonate sheet with UV protection on both sides, offering excellent light diffusion without transparency.

- excellent impact resistance
- excellent fire performance
- ease of handling and installation
- suitable for wide variety of exterior and interior applications such as balcony and staircase glazing

Design Freedom

Lexan® Exell® D ST sheet can be easily cold formed into gentle curves of 175 times the sheet thickness. It can also be cold line bent under an angle of a maximum of 90° using ordinary workshop equipment. Lexan® Exell® D ST is a thermoplastic sheet which can be thermoformed into the desired geometry whilst retaining the UV resistance. The textured sheet side should be under compression during curving, bending and thermoforming.

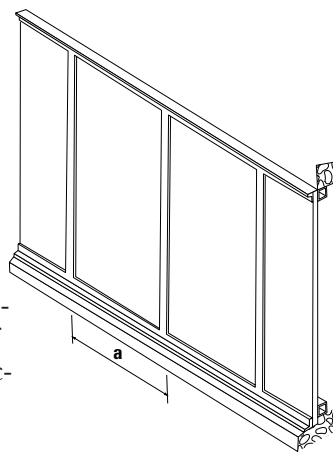
Glazing

Wet glazing

Lexan® Exell® D ST can be glazed using normal standard metal or wooden window frames in combination with glazing tapes and non hardening glazing compounds e.g. silicone.

Dry glazing

The advantage of dry glazing is that the rubber gaskets snap fit into the glazing bars which allows free movement of the sheet during expansion and contraction.



Lexan® Exell® D ST sheet thickness mm	(Ratio sheet width/sheet length 1:>2) Center to center distance glazing profiles "a"							
	400	375	425	400	375	450	430	420
3	400	375						
4	550	480	425	400	375			
5	620	565	525	495	470	450	430	420
6	750	675	625	595	560	540	510	500
8	1000	900	840	790	750	720	690	660
Loading in N/m ²	600	800	1000	1200	1400	1600	1800	≥2000

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Chemical Resistance

Lexan® Exell® D ST sheet has sufficient resistance to most chemical substances encountered in normal exterior use. In applications where the product will come into contact with aggressive chemicals, specific (application related) testing of the material is always advised. It is essential to check the compatibility before use.

Cleaning

Warm, soapy water is recommended for cleaning. Do not use abrasive cleaners or detergents, or sharp instruments—which may scratch.

Warranty

GE Plastics offers a Ten Year Limited Warranty on Lexan® Exell® D ST sheet covering discoloration, loss of light transmission and loss of strength due to weathering. See warranty for exact details.

Availability

Lexan® Exell® D ST sheet is supplied in the following standard specifications:

Gauge	: 3,4,5,6,8 mm
Width	: 1250 and 2050 mm
Length	: 3000 and 6000 mm
Texture	: Polished one side, pebble texture on reverse
Colour	: Clear, bronze (customised colours also available on special request)

Typical Properties

Property	Test method	Unit	Value ⁺
Physical			
Specific Gravity	ISO 1183	g/cm ³	1.20
Water absorption, 23°C 24 hours equilibrium	ISO 62	% %	0.10 0.35
Optical			
Light transmission for bronze material is 50%			
Light transmission 3mm	ASTM D1003	%	82
Light transmission 4mm	ASTM D1003	%	81
Light transmission 5mm	ASTM D1003	%	80
Light transmission 6mm	ASTM D1003	%	79
Light transmission 8mm	ASTM D1003	%	78
Mechanical			
Tensile stress, yield	ISO 527	N/mm ²	60
Tensile modulus	ISO 527	N/mm ²	2350
Tensile strain	ISO 527		
yield		%	6
break		%	120
Flexural stress, yield	ISO 178	N/mm ²	90
Flexural modulus	ISO 178	N/mm ²	2300
Izod notched impact 20°C	ISO 180/1A		
		kJ/m ²	65
Gardner impact 20°C	GE method	J	>37
-40°		J	>37
Thermal			
VICAT softening temperature B/120	ISO 306	°C	148
Ball pressure test 75°C	IEC 335-1	-	pass
125°C		-	pass
Mould shrinkage	ASTM D1955	%	0.6–0.8
Thermal expansion**	DIN 53752	1 °C	7x10 ⁻⁵

⁺ Typical values only. Variations within normal tolerances are possible for the various colours and gouges.

** Value measured on injection-moulded laboratory sample.

Values based on GE test data.



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