



Product Data Sheet

Lexan® Corrugated Sheet Standard

Description

Lexan® Corrugated Sheet (LCS) is a range of transparent, profiled glazing sheets extruded from Lexan polycarbonate resin. Some of the products in the range are designed to match specific profiled metal sheets used in industrial roofing and wall cladding. There are also a number of standard products designed for general roofing and side glazing applications such as public swimming pools, sports stadia and greenhouses.

The complete LCS range offers:

- high impact strength across a wide temperature range
- excellent optical properties
- light weight
- long-term weather resistance

*Note: see also our datasheets on Tailor-made products.

UV Resistance

The LCS range features a proprietary one-side surface protection against the degrading effects of ultra-violet radiation in natural sunlight. The UV-protected surface is marked with a continuous ribbon with the text: "Install this side (UV-protected side) outwards".

Light Transmission

Transparent Lexan® Corrugated Standard Sheet provide an excellent light transmission equal to 89% depending on thickness. Opal white and solar grey colours are available with respectively 45 and 35%.

Availability

LCS standard profiles different shapes, shown on the reverse side of this data sheet.

Length	Thickness depending on profile type	Colours
1.0 -11. 6 m	0.8 & 1 mm	clear (NA1042T) solar grey (G5743T) bronze (BR6186T) opal white (WH4455X)

(Different thicknesses, widths and colours can be made available by prior arrangement. Such arrangements may affect prices, warranty terms and/or other conditions of sale.)



Typical Properties

Property	Test Method	Unit	Value*
Physical			
Density	ISO 1183	g/cm ³	1.20
Water permeability (1 mm), 24 hrs	DIN 53122	g/m ²	2.3
Optical			
Light transmission (1mm)	ASTM D1003		
Bronze (515089)		%	25
Clear (11246)		%	89
Opal White (825002)		%	45
Solar grey (715107)		%	35
Mechanical			
Tensile strength, yield	ISO 527	MPa	60
Elongation, yield	ISO 527	%	7
Tensile modulus	ISO 527	MPa	2300
Gardner impact (1 mm)	GE method	J	24
Thermal			
VICAT softening temp., rate B/120	ISO 306	°C	145
Coefficient of linear thermal expansion	DIN 53752	1/°C	7 x 10 ⁻⁵
Continuous use temp rating	UL 746B	°C	100
Oxygen index	ISO 4589	%	25

*Note: Typical values only. Variations within normal tolerances are possible for the various colours.

Fire Test Performance

LCS has good fire performance against many national fire codes dependent on thickness and colour; please check with the local sales office for details.

Fixing

LCS/S/1/Sinus 177/51 profiles will be firmly fixed when fastened at every corrugation.

Other standard LCS profiles will be firmly fixed when fastened at every fourth corrugation (third corrugation in high wind areas) and every second corrugation at gutters and ridging.

When joining LCS standard profiles side by side, an overlap of at least 1 corrugation is appropriate. When length to length, overlaps should be 150 mm.

Warranty

GE Structured Products offers a limited warranty on all standard Corrugated Sheet products, covering loss of light transmission within ten (10) years of the date of sale and loss of impact strength due to weathering within five (5) years of the date of sale. See warranty for exact details.



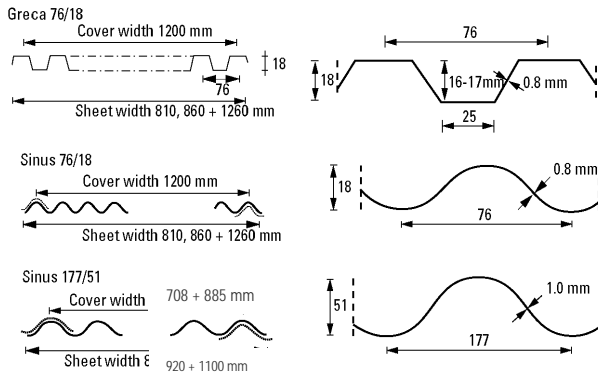
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Product Range LCS Standard Profiles

Product codes and extrusion widths

Typical dimensions of corrugations



Dimensions in (mm) / All dimensions determined from an unloaded sheet at 25°C.

Weight

Thickness /Grade	SN76/18	GR76/18	SN177/51
0.8mm	1086gr	1200gr	-
1.0mm	1357gr	1443gr	1446gr
1.1mm	1492gr	1587gr	1735gr

Loading Capacity

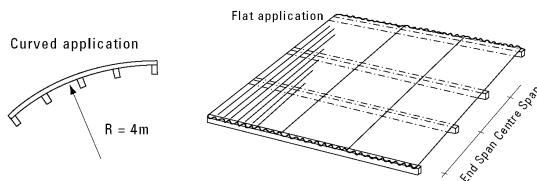
The table gives maximum External loadings before buckling of LCS/S.

At lower loadings also the deflection behaviour of the sheet will vary with the fixing or clamping conditions; consult GE Structured Products for information on specific situations.

Profile type span (mm)	Recommended	Max allowable loading (N/m ²), Typical properties**		
		single span/ end span	centre span	radius 4m*
LCS/S/I Greca 76/18	1000	1000	1500	-
	1200	500	1000	-
LCS/S/I Sinus 76/18	1000	1000	1500	1350
	1200	500	1000	950
LCS/S/1 Sinus 177/51	1000	1000	1500	-
	1200	500	1000	-

* In curved applications the recommended minimum radius is 4 m. Curved application only with the Sinus 76/18 profile

** Typical values only



Site Safety

Despite the high strength of polycarbonates, sensible precautions should be taken when working with LCS. In particular, crawl boards should be used during installation. Do not walk directly on sheets.

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