

# PRODUCT PROFILE



## LEXAN® THERMOCLEAR® SHEETS FILLED WITH NANOGEL® AEROGEL: A BETTER THERMAL AND ACOUSTIC INSULATION AND A BETTER LIGHT DIFFUSION

### Benefits of Nanogel:

- Very high thermal insulation: 0.018 (W/m.K)
- High and very diffuse light transmission
- Low weight: 60-80 kg/m<sup>3</sup>
- Improved acoustic insulation
- Aesthetically appealing
- Elimination of glare
- Hydrophobic: elimination of condensation and of fungus inside the sheets
- UV resistant



### Benefits of the Lexan Thermoclear sheets:

- Outstanding balance of low weight and high stiffness
- Ease of installation - it can be easily cut on site using conventional tools and can be cold-formed into tight radii without pre-forming
- Excellent thermal insulation
- Excellent resistance to UV light
- High impact resistance
- Good flame resistance
- UV protective coating on both sides offering 10-year limited written warranty against yellowing
- Long-term high light transmission
- Broad portfolio - variety of colours and surface finishes, coatings and gauges (thicknesses between 4 and 40 mm)
- Optional Solar Control IR feature

### Target Applications

- Industrial rooflights
- Glazing for offices and shopping centers
- Glazing for verandas of private housing
- Roofing for sport centers
- Special projects e.g. stadium roofing
- Vertical glazing

# Technical Characteristics

Structure (A)	Thickness (mm)	Colours	LT % (C)	DST % (C)	U-Value	Sound Test (E)
	10	Transparent	82	76	3,00	
	10	SC IR (B)	63	43	3,00	
	10 + Nanogel	Transparent	74	69	1,93 (D)	
	10 + Nanogel	SC IR	51	35	1,93 (D)	
	16	Transparent	74	69	2,40	19
	16	SC IR	55	35	2,40	
	16 + Nanogel	Transparent	64	60	1,31 (D)	21
	16 + Nanogel	SC IR	45	28	1,31 (D)	
	25	Transparent	71	66	1,5	18
	25	SC IR	48	29	1,5	18
	25 + Nanogel	Transparent	55	53	0,89 (G)	23 (G)
	25 + Nanogel (F)	SC IR	34	20	0,89	23

(A) Product properties have been measured for a selection of available Lexan Thermoclear sheets.

**Important:** not all structures have a suitable geometry for filling with Nanogel.

(B) "SC IR" refers to Lexan Thermoclear Solar Control IR. This material offers a continued transparency, but blocks and reflects the heat generating infra red (IR) waves of the sunlight. The values of Light Transmission (LT) and Direct Solar Transmission (DST) clearly show this.

(C) LD and DST values measured with a large sphere spectrophotometer according to the EN 410 standard

(D) U-values measured by Cabot in the U.S.A.

(E) Measured by Peutz (NL) according to the EN 140-3/18 standard

(F) Product is Lexan Thermoclear 25 mm triple wall

(G) Product tested here is Lexan Thermoclear 25 mm 6 walls

## Product warranties and certifications

The Nanogel filled Lexan Thermoclear sheets are supplied with separate warranties from GE Plastics, Cabot and Xtralite.

- A limited warranty from GE Plastics applies to the Lexan Thermoclear sheets.
- Cabot warrants the quality of the Nanogel sheets, filling, closing and supply.
- Xtralite warrants the proper installation of the filled sheets in the application you selected.

Various types of Lexan Thermoclear sheets are currently undergoing testing under a variety of European flammability standards, among which EN 13501-1. Please contact us for further details on the test results.



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