

PRODUCT DATASHEET

LEXAN™ XHR6000 Sheet

DESCRIPTION

LEXAN™ XHR6000 sheet is a high performance product formulated specifically for demanding applications in the Aerospace interiors market. LEXAN XHR6000 sheet combines the features of robust compliance to toxicity, flame, and smoke with very low heat release performance (OSU). Fabrication and thermoforming characteristics are improved over other high heat OSU compliant materials. LEXAN™ XHR6000 sheet forms at similar temperatures to Lexan polycarbonate. The proprietary polymer is inherently transparent, so it is readily colorable, including bright whites and is Airbus Qualified according to AIMS04-06-001. (Airbus Industrie Material Specification)

TYPICAL PROPERTY VALUES

Property	Test Method	Units	Value
Physical			
Density	ISO 1183	g/cm ³	1.34
Water absorption, 50% RH, 23 °C	ISO 62	%	0.11
Water absorption, saturation, 23°C	ISO 62	%	0.28
Mechanical			
Yield stress 50 mm/min	ISO 527	Mpa	>60
Yield strain 50 mm/min	ISO 527	%	6
Nominal strain at break 50 mm/min	ISO 527	%	80
Tensile modulus 1 mm/min	ISO 527	MPa	2300
Flexural strength 2 mm/min	ISO 178	MPa	100
Flexural modulus 2 mm/min	ISO 178	MPa	2300
Impact			
Charpy impact, notched, 3.0 mm	ISO 179/1C	kJ/m ²	25
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m ²	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m ²	15
Thermal			
Vicat softening temperature, B/120	ISO 306	°C	139
Temperature of deflection under load (type A), 1.8 MPa, flat	ISO 75	°C	117
Thermal conductivity	ISO 8302	W/m.°C	0.2
Coefficient of linear thermal expansion, 23-55°C	ISO 11359-2	1/°C	6x10 ⁻⁵
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
Fire Ratings			
Aircraft			
Vertical burn, 60 s	FAR 25.583(a)+App.F	-	Pass (1-4mm)
Smoke density	ABD0031	-	Pass, Ds(4min)<150 (1-4mm)
Smoke toxicity	ABD0031,BSS 7239	-	Pass (1-4mm)
OSU total heat release, 2 min.	FAR 25.583(d) App.F	kW.min/m2	Pass <55 (1-6mm)
OSU peak heat release rate, 5 min.	FAR 25.583(d) App.F	kW/m2	Pass <55 (1-6mm)

- These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product. Variations within normal tolerances are possible for various colors. If minimum certifiable properties are required please contact your local SABIC representative. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties are measured on injection molded samples.
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PROCESSING

Lexan XHR6000 sheet is ideally suited to thermoforming. It offers high, deep draw ratios, equal wall thickness distribution, and it can be formed into complex shapes using standard thermoforming equipment. Sandwich type heating systems give the best results. Lexan XHR6000 sheet has a forming temperature range of 185 - 205°C. When forming, a draft angle of at least 3° should be allowed, and post mold shrinkage of 0.3 – 0.8% taken into account, depending on mold temperature.

PRE-DRYING

It is important to ensure that Lexan XHR6000 sheets are free of moisture prior to thermoforming. A hot air circulating oven set at 120°C is recommended. Pre-drying times vary from 3-12 hours for 1.2 to 4.0mm thick sheets.

ASSEMBLING

Parts made from Lexan XHR6000 sheet can be assembled with plastics, metals, rubber and other materials using many types of adhesive bonding, welding and mechanical fastening techniques. Since some of these materials can cause environmental stress cracking, please consult SABIC Innovative Plastics, Film & Sheet representative for advice on specific applications.

PRODUCT AVAILABILITY

EUROPE:

Standard gauges: 1, 1.5, 2, 3, 4mm
Size: 1250x2050mm
Textures: Suede XHR6006
Masking: none
Colors: Custom colors are available

AMERICAS:

Standard gauges: 0.04, 0.06, 0.093, 0.125, 0.157 inch
Size: 4x8' (web width)
Textures: XHR6006, available on req.
XHR6000/XHR6029
Masking: none
Colors: Custom colors are available

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