

# LEXAN™ XHR6000 SHEET

## PRODUCT DATASHEET

### 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. LEXAN XHR6000 sheet is Airbus Qualified according to AIMS04-06-001 (Airbus Industry Material Specification).

### TYPICAL PROPERTY VALUES

PROPERTY	TEST METHOD	UNITS	VALUE
<b>PHYSICAL</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.34
Water absorption, 50% RH, 23 °C	ISO 62	%	0.11
Water absorption, saturation, 23°C	ISO 62	%	0.28
<b>MECHANICAL</b>			
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
<b>IMPACT</b>			
Charpy impact, notched, 3.0 mm	ISO 179/1eA	kJ/m <sup>2</sup>	25
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m <sup>2</sup>	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m <sup>2</sup>	15
<b>THERMAL</b>			
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 <sup>-5</sup>
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
<b>FIRE RATINGS</b>			
<b>Aircraft</b>			
Vertical burn, 60 s	FAR 25.583(a)+App.F	-	Pass (1-4mm)
Smoke density	ABD0031	-	Pass, D <sub>s</sub> (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/m <sup>2</sup>	Pass <55 (1-6mm)
OSU peak heat release rate, 5 min.	FAR 25.583(d) App.F	kW/m <sup>2</sup>	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, Specialty Film & Sheet 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 your SABIC representative for advice on specific applications.

## PRODUCT AVAILABILITY

### EUROPE:

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

### AMERICAS:

<b>Standard gauges:</b>	0.04, 0.06, 0.093, 0.125, 0.157 inch
<b>Size:</b>	4x8' (web width)
<b>Textures:</b>	XHR6006, available on req. XHR6000/XHR6029/XHR6005
<b>Masking:</b>	none
<b>Colors:</b>	Custom colors are available

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## CONTACT US:

### Middle East and Africa

SABIC Global Headquarters  
PO Box 5101  
Riyadh 11422  
Saudi Arabia  
T +966 (0) 1 225 8000  
F +966 (0) 1 225 9000  
E [info@sabic.com](mailto:info@sabic.com)

### Email

[sfs.info@sabic-ip.com](mailto:sfs.info@sabic-ip.com)

### Americas

Specialty Film & Sheet  
1 Plastics Avenue  
Pittsfield, MA 01201  
USA  
Toll-free 1 800 323 3783  
T 1 413 448 6655  
F (888) 443 2033  
E [Spsinside.sales@sabic-ip.com](mailto:Spsinside.sales@sabic-ip.com)

### Europe

Specialty Film & Sheet  
Plasticslaan 1  
4612 PX  
Bergen op Zoom  
The Netherlands  
T +31 (0)164 293678  
F +31 (0)164 293272  
E [sfs.info@sabic-ip.com](mailto:sfs.info@sabic-ip.com)

### Asia Pacific

Specialty Film & Sheet  
2550 Xiupu Road  
Pudong  
201319 Shanghai  
China  
T +86 21 2037 8188  
F +86 21 2037 8288  
E [sfs.info@sabic-ip.com](mailto:sfs.info@sabic-ip.com)

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