

Description

Lexan* Margard* FLG5 XT sheet is a transparent UV and abrasion resistant glazing material. It has an extremely high impact strength, with the capacity to be cold curved , drape formed or laminated. One side formable hard-coated , it offers resistance against wear and tear.

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Density 4)	ISO 1183	g/cm	1.20
Water absorption, 24 hours	ISO 62	mg	10.0
Mechanical			
Tensile stress, yield †)	ISO 527	MPa	60
Tensile modulus†)	ISO 527	MPa	2350
Elongation, yield †)	ISO 527	%	6
Elongation, break †)	ISO 527	%	100
Flexural strength, yield ‡)	ISO 178	MPa	90
Flexural modulus ‡)	ISO 178	MPa	2300
Thermal			
Vicat Softening Temp, Rate B/120 ‡)	ISO 306	°C	145
HDT, 0.45 MPa ‡)	ISO 75	°C	138
Therm. Expansion ‡)	ISO 11359-2	1/°C	7x10-5
Optical			
Light transmission (clear 112,3-6mm)	ASTM D 1003	%	89.5-86
Imperfections#) (3-6.0mm)	DIN 52305-A-AZ	Pass	
Taber abrasion†)	ASTM D 1044	%	< 10

♦ This property data has been derived from Lexan* resin data for the material used to produce this sheet product

#) Passing DIN 52305/AS requirements for 3-6 mm gauge

†) Taber abrasion conditions at 100 cycles, 500g, CS-10F wheels at coated side, however the reproducibility of the test method between laboratories is variable in that single and individual measurement can be as high as 11%.

‡) Coating might /will crack before specified value

‡) Property of the base sheet and/or un-coated side

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Curved Applications

Design freedom, light weight and optical clarity combined with its excellent mechanical properties makes Lexan* Margard* FLG5 XT sheet an excellent candidate glazing material for shaped applications in need of a single side formable coating, such as for example "No spall" glass/Lexan laminates which need to be formed.

Optical Performance

Clear Lexan Margard FLG5XT sheet offers excellent clarity and transmission in the visible light and near infrared region of the spectrum. As it is essentially opaque to all wavelengths below 385 nanometers, it is an excellent candidate to help protect art, antiques, retail displays and fabrics from damaging effects of UV rays. Lexan Margard FLG5 XT sheet is based on High Optical Lexan sheet measured according to the DIN 52305 A AZ for gauges in the range of 3.00mm – 8.00mm.

Chemical Resistance

The mar-resistant coating of Lexan Margard FLG5 XT sheet has sufficient resistance to common chemicals encountered in everyday use. Taking into account the complexity of chemical compatibility, we strongly recommend that you liaise with SABIC Innovative Plastics for testing of chemicals which come into contact with Lexan sheet products. It is your responsibility to carry out the necessary tests to determine its suitability for your process, application and end-use.

Processing

Lexan Margard FLG5 XT sheet may be cold curved into radii of > 300 times the thickness.



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Americas:
SABIC Innovative Plastics
Specialty Film & Sheet
One Plastics Avenue
Pittsfield, MA 01201
USA
Tel. (1) (413) 448 5400
Fax. (1) (413) 448 7506
Toll free: 1-800 451 3147

Europe:
SABIC Innovative Plastics
Specialty Film & Sheet
Plasticslaan 1
NL - 4612 PX Bergen op Zoom
The Netherlands
Tel. (31) (164) 292911
Fax. (31) (164) 293272

Pacific:
SABIC Innovative Plastics
Specialty Film & Sheet
1266 Nanjin Road (W)
Plaza 66, 17th Floor
200040 Shanghai, China
Tel. (86) 21 62881088
Fax. (86) 21 62880818

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It can also be drape-formed at a maximum temperature of 155°C, normally without pre-drying. For glass-polycarbonate laminates one should follow the instructions for the laminations process issued by the polyurethane interlayer producers not exceeding 120°C.

Ripple Orientation

Ripple direction may play an important role in the application regarding the optical performance of the sheet.

For this purpose the ripple direction is indicated on the sheet masking.

Product Availability

Product code: Lexan Margard FLG5 XT
Standard gauge: 3.00 mm , 4.00mm , 5.00mm and 6.00mm.
(other gauges upon request)
Standard sizes: 2000 x 2920 mm
(other dimensions upon request)

Masking:
Top side: Co-ex opal white PE (matrix dot-printed grade-name)

Bottom side: Co-ex opal white PE
Storage: Do not store Lexan Margard FLG5 XT sheet outside or at elevated temperatures .

UV Protection

Lexan Margard FLG5 XT sheet has a proprietary UV protected surface, giving excellent durability to outdoor weathering and comes with a 5 year limited written warranty against yellowing (see warranty for details).