

Description

Lexan* Margard* FMR5 XT sheet is a transparent UV and abrasion resistant glazing material. Extremely high impact strength, with the capacity to be cold curved or drape formed. Two side formable hard-coated, offers resistance against wear and tear.

Typical Property Values ◆

Property	Test Method	Unit	Value
Physical			
Density	ISO 1183	g/cm	1.20
Water absorption, 24 hours	ISO 62	mg	10.0
Mechanical			
Tensile strength, yield	ISO 527	MPa	60
Tensile strength, break	ISO 527	MPa	70
Tensile elongation, yield	ISO 527	%	6
Tensile elongation, break	ISO 527	%	120
Tensile modulus	ISO 527	MPa	2300
Flexural strength, yield	ISO 178	MPa	90
Flexural modulus	ISO 178	MPa	2500
Hardness	ISO 2039/1	MPa	95
Impact - striking energy per drop	DIN 52290 Part4 A3	J	383
- total striking energy	DIN 52290 Part4 A3	J	1149
Taber abrasion †)	ASTM D 1044	%	< 10
Thermal			
Vicat Softening Temp, Rate B	ISO 306	°C	145
HDT, 0.45 MPa	ISO 75	°C	138
Thermal conductivity	ASTM C 177	W/m°C	0.20
Coeff. of Linear Therm. Expansion	DIN53752	m/m°C	7x10 ⁻⁵
Thermal Index	UL 746B	°C	100
Optical			
Light transmission (clear 112)	ASTM D 1003	%	84-94
Imperfections #)	DIN 52305-A-AZ	Pass	

◆ These property values have been derived from Lexan* resin data for the material used to produce this sheet product.

#) passing DIN 52305/AS requirements for 3-8 mm gauge

†) Taber abrasion conditions at 100 cycles, 500g, CS-10F wheels

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Curved Applications

Design freedom, light weight and optical clarity combined with its superior mechanical properties makes Lexan* Margard* FMR5 XT sheet an excellent candidate for shaped applications like: motor-bike windshields, curved windows (e.g. revolving doors), partitions, skylights, barrel vaults, balcony glazing, stair-glazing, shelters, machine - safety guards.

Optical Performance

Clear Lexan Margard FMR5 XT sheet can offer 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 for protecting art, antiques, retail displays and fabrics from damaging effects of UV rays. Lexan Margard FMR5 XT sheet is based on high optical Lexan sheet measured according to the DIN 52305 A AZ. Lexan Margard FMR5 XT sheet is ANSI/SAE Z26.1 certified (3.00mm – 6.00mm).

Chemical Resistance

The mar-resistant coating of Lexan Margard FMR5 XT sheet has sufficient resistance to common chemicals encountered in everyday use. Taking into account the complexity of chemical compatibility, we strongly recommend liaison with GE-Plastics for testing of chemicals which come into contact with our Lexan sheet products.

Fire Test Performance

Lexan Margard FMR5 XT sheet has good fire performance against many national fire codes dependent on thickness and color; please check with the local sales office for details.

UV Protection

Lexan Margard FMR5 XT sheet has proprietary UV protected surfaces, giving excellent durability to outdoor weathering and comes with a 5 year limited written warranty (see warranty for details).

Impact Strength

Lexan sheet offers outstanding impact strength and complies with the majority of international standards. With a thickness of 4 mm and upwards it complies with DIN 52290 part 4.

Processing

Lexan Margard FMR5 XT sheet can be cold curved into radii of > 300 times the thickness. It can also be drape-formed at a maximum temperature of 155°C, normally without pre-drying.

Ripple Orientation

Ripple direction may play an important role in the optical performance of the sheet. This direction is indicated on the sheet masking. The surface which is foreseen with the -2-strips indicating grade and ripple direction, is hard coated.

Product Availability

Product code: Lexan Margard FMR5 XT
Standard gauge: 3.00 mm, 4.00 mm, 5.00 mm, 6.00 mm, 8.00 mm, 9.50 mm and 12.00 mm
Standard sizes: 2000 x 3000 mm
Masking, Top side: Co-ex opal white PE (matrix dot-printed grade-name)
Bottom side: Co-ex opal white PE



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