

PRODUCT DATASHEET

LEXAN™ MARGARD™ FMR5XT (Formable) Sheet

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 coated, offers resistance against wear and tear.

TYPICAL PROPERTY VALUES ♦

Property	Test Method	Units	Value
Physical			
Density	ISO 1183	g/cm ³	1.20
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
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	%	>100
Tensile modulus 1 mm/min	ISO 527	MPa	2300
Flexural strength 2 mm/min	ISO 178	MPa	90
Flexural modulus 2 mm/min	ISO 178	MPa	2300
Taber haze - 100 cycles, 500 gram, CS-10F	ASTM D1044	%	4 - 8
Thermal			
Vicat softening temperature, rate B/120	ISO 306	°C	145
Temperature of deflection under load (type A), 1.8 MPa, flat	ISO 75-2	°C	127
Thermal conductivity	ISO 8302	W/m.°C	0.2
Coefficient of linear thermal expansion, 23-55°C	ISO 11359-2	1/°C	7x10 ⁻⁵
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
Optical			
Light transmission 3 mm	ASTM D1003	%	90
Light transmission 4 mm	ASTM D1003	%	90
Light transmission 5 mm	ASTM D1003	%	89
Light transmission 6 mm	ASTM D1003	%	89
Light transmission 8 mm	ASTM D1003	%	88
Light transmission 9.5 mm	ASTM D1003	%	87
Light transmission 12 mm	ASTM D1003	%	85

♦ Some of the property values have been derived from LEXAN resin data for the material used to produce this sheet product.

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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 SABIC Innovative 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, 8.00mm, 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

Americas Headquarters

SABIC Innovative Plastics
One Plastics Avenue
Pittsfield, MA 01201
USA
T +1-413-448-7125
Toll-free: 1-800-323-3783
F +1 (888) 443-2033
sfsustomerservice@sabic-ip.com

European Headquarters

SABIC Innovative Plastics
Plasticslaan 1
4612 PX
Bergen op Zoom
The Netherlands
T +31 164 293684
F +31 164 293272
Sfs.info@sabic-ip.com

Pacific Headquarters

SABIC Innovative Plastics
Specialty Film & Sheet
1266 Nanjing Road (W)
16th Floor, Plaza 66
200040 Shanghai
China
T +86 21 62881088 ext. 6733
F +86 21 6288 0818

E-mail

sfsustomerservice@sabic-ip.com



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