

# LEXAN™ MARGARD™ MR5 IR SHEET

## PRODUCT DATASHEET

### DESCRIPTION

High abrasion resistant, weatherable, LEXAN™ MARGARD™ MR5 IR sheet is a both-side hard coated polycarbonate sheet offering excellent abrasion resistance, excellent dimensional stability, impact resistance, optical clarity in combination with an outstanding IR absorption. The outstanding Infra Red absorption with a Light to Solar gain ratio of 1.22 ◆ for the color GN9A047T and 1.17 ◆ for the color GN8A081T results in outstanding heat-management properties. The Solar Transmission at 6.00mm for GN8A081T is 63.5% (+/-5%) and the Solar Transmission at 6.00mm for GN9A047T is 51% (+/-5%). Typical applications can be flat glazing in specialty vehicles, separations screens and flat glazing systems needing impact resistance combined with chemical and abrasion resistance and heat management.

### TYPICAL PROPERTY VALUES ◆

PROPERTY	TEST METHOD	UNITS	VALUE
<b>PHYSICAL</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.20
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
<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	%	>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	%	1 - 3
Taber haze - 500 cycles, 500 gram, CS-10F	ASTM D1044	%	3 - 8
<b>THERMAL</b>			
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 <sup>-5</sup>
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
<b>ELECTRICAL</b>			
Volume resistivity	IEC 60093	Ohm.cm	>10 <sup>15</sup>
Dielectric strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	18

◆ 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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## CHEMICAL RESISTANCE

LEXAN MARGARD MR5 IR sheet has high resistance at the coated side to many chemicals, such as: diesel fuel, toluene, acetone dichloromethane. In applications where it will come into contact with aggressive chemicals, specific (application related) testing of the material is strongly recommended. We recommend you to test the chemicals in contact with LEXAN MARGARD MR5 IR prior to usage in a chemical aggressive environment.

## PRODUCT AVAILABILITY\*

**Product Code:** MR5 IR  
**Standard Size:** 2000 x 3000 mm  
**Thicknesses:** 3, 6, 8 and 12 mm  
**Standard Colors:** GN8A081T, GN9A047T

\*) Other gauges and other dimensions upon request and are subject to minimum order quantities.

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