

GE Plastics PC LEXAN® 141R

Date: February 09, 2005

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LEXAN 141R is a medium viscosity multi purpose grade and contains a release agent to ensure easy processing. LEXAN 141R is available in transparent, translucent and opaque colours.

	Standard	Unit	Value
1. Physical Properties			

Density	ISO 1183	g/cm ³	1.20
Melt Volume-Flow Rate (MVR) (300 °C/1.2 kg)	ISO 1133	cm ³ /10min.	12.0
Water Absorption 23C/50RH	ISO 62	%	0.15
Water Absorption Sat/23C	ISO 62	%	0.35

2. Mechanical Properties			
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Tensile Modulus (1mm/min)	ISO 527-1, -2	MPa	2350
Tensile Stress at Yield (50mm/min)	ISO 527-1, -2	MPa	63
Tensile Stress at Break (50mm/min)	ISO 527-1, -2	MPa	70
Tensile Strain at Yield (50mm/min)	ISO 527-1, -2	%	6.0
Tensile Strain at Break (50mm/min)	ISO 527-1, -2	%	110
Flexural Modulus (2mm/min)	ISO 178	MPa	2300
Charpy Unnotched Impact Strength (23 °C edgewise)	ISO 179	kJ/m ²	No Break
Charpy Unnotched Impact Strength (-30 °C edgewise)	ISO 179	kJ/m ²	No Break
Charpy Notched Impact Strength (23 °C, Type 2, Notch C)	ISO 179	kJ/m ²	35
Unnotched Izod Impact Strength (23 °C, Type 1)	ISO 180	kJ/m ²	No Break
Unnotched Izod Impact Strength (-30 °C, Type 1)	ISO 180	kJ/m ²	No Break
Notched Izod Impact Strength (23 °C, Type 1, Notch A)	ISO 180	kJ/m ²	12
Notched Izod Impact Strength (-30 °C, Type 1, Notch A)	ISO 180	kJ/m ²	10
Ball Indentation Hardness (H 358/30)	ISO 2039-1	MPa	95

3. Thermal Properties			
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Coefficient of Linear Thermal Expansion, Flow (23 to 80 °C)	ISO 11359-1,-2	cm/cm/°C	7.0E-005
HDT B (0.45 MPa) Unannealed	ISO 75B-1,-2	°C	136
HDT A (1.80 MPa) Unannealed	ISO 75A-1,-2	°C	125
Vicat Softening Temperature A50 (50 °C/h, 10N)	ISO 306	°C	153
Vicat Softening Temperature B50 (50 °C/h, 50N)	ISO 306	°C	141
Vicat Softening Temperature B120 (120 °C/h, 50N)	ISO 306	°C	142
Thermal Conductivity	ISO 8302	W/m/K	0.20

4. Electrical Properties			
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Relative Permittivity (60 Hz)	IEC 60250	--	2.7
Relative Permittivity (50 Hz)	IEC 60250	--	2.7
Relative Permittivity (1 MHz)	IEC 60250	--	2.7
Dissipation Factor (60 Hz)	IEC 60250	--	0.001
Dissipation Factor (50 Hz)	IEC 60250	--	0.001
Dissipation Factor (1 MHz)	IEC 60250	--	0.01
Volume Resistivity	IEC 60093	Ohm•cm	1 E+015
Surface Resistivity	IEC 60093	Ohm	1 E+015
Electric Strength (1mm thickness)	IEC 60243-1	kV/mm	15
Electric Strength (in Oil, 1.60mm)	IEC 60243-1	kV/mm	27
Electric Strength (in Oil, 3.20mm)	IEC 60243-1	kV/mm	17
Comp Track Index	IEC 60112	V	250

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5. Flame Characteristics			

Flame Rating – UL (0.7mm)	(E121562)	UL 94	class	HB
Flame Rating – UL (3.0mm)	(E121562)	UL 94	class	HB
Limiting Oxygen Index (LOI)		ISO 4589-1,-2	%	25
Rel. Temp. Index Mech. w/olmp		UL 746	°C	125
Rel. Temp. Index Mech. w/lmp		UL 746	°C	125
Rel. Temp. Index Elect.		UL 746	°C	130

6. Additional Properties			
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Ball Pressure Test (125 °C ± 2 °C)		IEC 60335-1	--	PASSES
Glow Wire Flammability Index (850 °C)		IEC 60695-2-12	at 1mm	PASSES

Notes:

The figures in this datasheet are guide values. The values are effected by processing conditions, modifications, additives and environmental conditions and they do not release you from the obligation to check the validity and to undertake tests on your own.

This information is based on our present knowledge and experience. The material data is not to be construed as guaranteeing specific properties and the data can not be used to deduce the suitability for a particular application.