SABIC Innovative Plastics™

Lexan* Resin 1278R

Europe-Africa-Middle East: COMMERCIAL

LEXAN 1278R is a medium viscosity, 20% glass reinforced, flame retardant grade, offering a very high rigidity. It is especially designed for applications like industrial enclosures and fuse boxes requiring a low knock-out strength for moulded-in membranes.

Property

TYPICAL PROPERTIES (1)			
MECHANICAL	Value	Unit	Standard
Taber Abrasion, CS-17, 1 kg	17	mg/1000cy	SABIC Method
Tensile Stress, break, 5 mm/min	80	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	5200	MPa	ISO 527
Flexural Stress, break, 2 mm/min	120	MPa	ISO 178
Flexural Modulus, 2 mm/min	5000	MPa	ISO 178
Hardness, H358/30	160	MPa	ISO 2039-1
IMPACT	Value	Unit	Standard
Charpy Impact, unnotched, -30°C	5	kJ/m²	ISO 179/2C
Izod Impact, unnotched 80*10*3 +23°C	35	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	35	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	7	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	6	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	6	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	5	kJ/m²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	40	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	40	kJ/m²	ISO 179/1eU
Charpy Impact, notched, 23°C	8	kJ/m²	ISO 179/2C
Charpy Impact, notched, -20°C	5	kJ/m²	ISO 179/2C
THERMAL	Value	Unit	Standard
Thermal Conductivity	0.22	W/m-°C	ISO 8302
CTE, 23°C to 80°C, flow	3.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate A/50	151	°C	ISO 306
Vicat Softening Temp, Rate B/50	141	°C	ISO 306
Vicat Softening Temp, Rate B/120	143	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	140	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	134	°C	ISO 75/Ae
Relative Temp Index, Elec	120	°C	UL 746B
Relative Temp Index, Mech w/impact	120	°C	UL 746B
Relative Temp Index, Mech w/o impact	120	°C	UL 746B
PHYSICAL	Value	Unit	Standard
Mold Shrinkage on Tensile Bar, flow (2)	0.2 - 0.5	%	SABIC Method
Density	1.35	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.29	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.12	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	12	cm³/10 min	ISO 1133
OPTICAL	Value	Unit	Standard

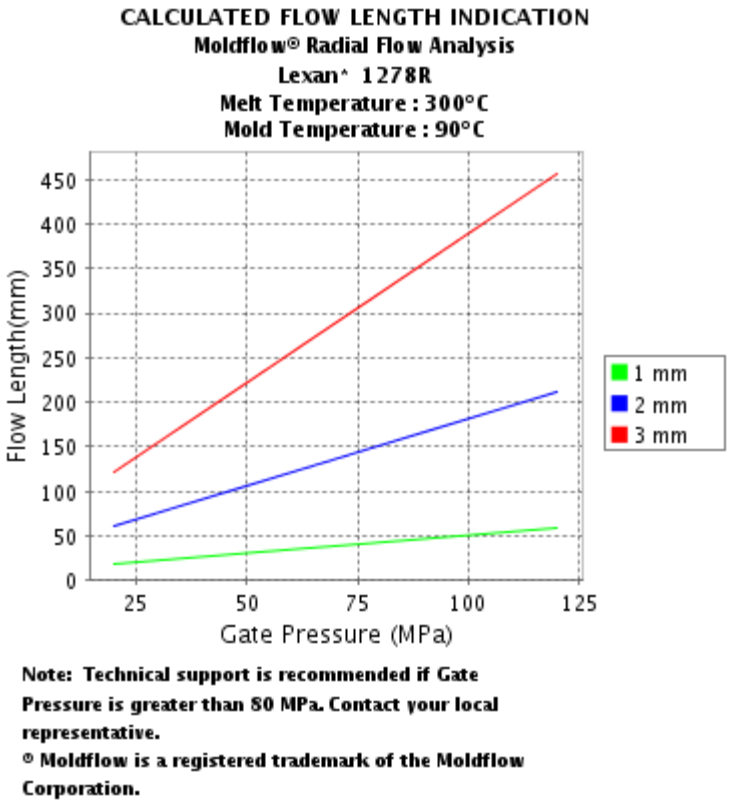
Haze	NA	%	ASTM D 1003
Refractive Index	NA	-	ISO 489
ELECTRICAL	Value	Unit	Standard
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 3.2 mm	16	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	3	-	IEC 60250
Relative Permittivity, 1 MHz	2.9	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Comparative Tracking Index	150	V	IEC 60112
Comparative Tracking Index, M	125	V	IEC 60112
FLAME CHARACTERISTICS	Value	Unit	Standard
UL Recognized, 94V-1 Flame Class Rating (3)	1.5	mm	UL 94
Glow Wire Flammability Index 850°C, passes at	1	mm	IEC 60695-2-12
Glow Wire Flammability Index 960°C, passes at	3.2	mm	IEC 60695-2-12
Oxygen Index (LOI)	34	%	ISO 4589

Source GMD, last updated:07/31/1997

Processing

Parameter Injection Molding	Value	Unit
Drying Temperature	120	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	280 - 310	°C
Nozzle Temperature	270 - 290	°C
Front - Zone 3 Temperature	280 - 310	°C
Middle - Zone 2 Temperature	270 - 290	°C
Rear - Zone 1 Temperature	260 - 280	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	80 - 110	°C

Source GMD, last updated:07/31/1997



Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.

® Moldflow is a registered trademark of the Moldflow Corporation.

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR (LOCAL SALES OFFICE) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.
(2) Only typical data for selection purposes. Not to be used for part or tool design.
(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
(4) Internal measurements according to UL standards.