

Technical Data Sheet

**Polyman (PC) XP 31 RN / RS**

Polycarbonate
LyondellBasell Industries
Engineering Plastics

Product Description

Increased impact resistant PC standard grade
RN: food contact grade - RS: UV-stabilized

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	
Features	• Good Impact Resistance		
Automotive Specifications	• GM QK 005941 Color: 71895 Black		
UL File Number	• E86615		
Processing Method	• Injection Molding		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	9.0 cm ³ /10min	9.0 cm ³ /10min	ISO 1133
Water Absorption			ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.34 %	0.34 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ISO 527-1/1A/1
Tensile Stress (Yield)	8850 psi	61.0 MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	7.0 %	7.0 %	ISO 527-2/1A/50
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	38 ft·lb/in ²	79 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength 73°F (23°C)	No Break	No Break	ISO 179/1eU
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Ball Indentation Hardness (H 358/30)	16000 psi	110 MPa	ISO 2039-1
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			
66 psi (0.45 MPa), Unannealed	280 °F	138 °C	ISO 75-2/Bf
264 psi (1.8 MPa), Unannealed	261 °F	127 °C	ISO 75-2/Af
Vicat Softening Temperature	297 °F	147 °C	ISO 306/B50
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+13 ohms·m	> 1.0E+13 ohms·m	IEC 62631-3-1
Comparative Tracking Index	275 V	275 V	IEC 60112
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate			
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	ISO 3795
0.0787 in (2.00 mm)	< 3.9 in/min	< 100 mm/min	FMVSS 302
Flammability Classification			IEC 60695-11-10, -20
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	
Glow Wire Flammability Index			IEC 60695-2-12
0.08 in (2.0 mm)	1560 °F	850 °C	

Additional Information

- 1.) Not for use in food contact applications
- 2.) Not for use in medical or pharmaceutical applications

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Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	4.0 to 12 hr	4.0 to 12 hr
Processing (Melt) Temp	536 to 590 °F	280 to 310 °C
Mold Temperature	185 to 239 °F	85 to 115 °C

Notes

These are typical property values not to be construed as specification limits.

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Product Storage and Handling

- Product should be stored in dry conditions at temperatures below 50°C and protected from UV-light
- Improper storage may bring damage to the packaging and can negatively affects on the quality of this product
- Keep material completely dry for good processing

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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