

Technical Data Sheet

POLYMAN® (PC) XP 31 RN / RS

Polycarbonate
Engineering Plastics

Product Description

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

General

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/cm³	1.20 g/cm³	ISO 1183/A
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	9.00 cm³/10min	9.00 cm³/10min	ISO 1133
Molding Shrinkage	0.40 to 0.60 %	0.40 to 0.60 %	ISO 294-4
Water Absorption Equilibrium, 73°F (23°C), 50% RH	0.34 %	0.34 %	ISO 62
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ISO 527-2/1A/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/in²	79 kJ/m²	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
Heat Deflection Temperature 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 0.06 in (1.5 mm)	HB	HB	IEC 60695-11-10, -20
0.12 in (3.0 mm)	HB	HB	
Glow Wire Flammability Index 0.08 in (2.0 mm)	1560 °F	850 °C	IEC 60695-2-12

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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.