

Technical Information



PULSE™ AX50

PC/ABS Engineering Resin

Overview

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PULSE™ AX50 is a PC/ABS especially designed for automotive interior and exterior applications, which are direct surface in-mould-coated in a closed injection mould with e.g. polyurethane/polyurea formulation. PULSE™ AX50 as substrate provides excellent adhesion with the lacquer on as moulded parts, which is retained or improved after thermo-oxidative ageing, hydrolysis, climate change, hot light ageing and sun simulation test.

Benefits

- Very good adhesion with polyurethane and polyurea.
- High Heat.
- Excellent ductility at 23 °C and Low Temperatures.

Applications

- Direct surface in-mould-coating automotive interior and exterior applications

Govt. and Industry Standards

- DBL 9202.30

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.09 g/cm³	1.09 g/cm³	ISO 1183
Apparent (Bulk) Density	0.63 g/cm³	0.63 g/cm³	ISO 60
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	16 g/10 min	16 g/10 min	ISO 1133
Spiral Flow ¹	22.4 in	57.0 cm	
Molding Shrinkage	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ISO 294-4
VOC Content	20.0 µg/g	20.0 µg/g	VDA 277
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	312000 psi	2150 MPa	ISO 527-1/1
Tensile Stress (Yield)	6240 psi	43.0 MPa	ISO 527-2/50
Tensile Strain (Break)	100 %	100 %	ISO 527-2/50
Flexural Modulus ²	305000 psi	2100 MPa	ISO 178
Flexural Stress ²	10200 psi	70.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	21 ft-lb/in²	45 kJ/m²	
73°F (23°C)	24 ft-lb/in²	50 kJ/m²	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi (1.8 MPa), Unannealed	194 °F	90.0 °C	
Vicat Softening Temperature	228 °F	109 °C	ISO 306/B50
CLTE - Flow (-22 to 176°F (-30 to 80°C))	4.2E-5 to 4.4E-5 in/in/°F	7.5E-5 to 8.0E-5 cm/cm/°C	ISO 11359-2
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	212 °F	100 °C	
Drying Time	4.0 hr	4.0 hr	
Processing (Melt) Temp	491 to 536 °F	255 to 280 °C	
Mold Temperature	140 to 176 °F	60 to 80 °C	

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ Melt Temperature: 500°F (260°C), Injection Pressure: 2.61E+4 psi (1.80E+3 bar)

² 0.079 in/min (2.0 mm/min)

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