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-oxydative 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