

PULSE™ A35-110

PC/ABS Engineering Resin

Trinseo

Message:

PULSE* A 35-110 engineering resins give exceptional impact strength even at low temperatures and have high heat distortion temperature. The proprietary mass ABS technology allows these physical properties to be achieved together with superior flow performance for easy moulding of complex parts and design freedom. PULSE A 35-110 is used in a wide range of applications where a balance of low temperature toughness, high heat distortion and processability are required. The high distortion temperature of this grade makes PULSE A 35-110 particularly suitable for automotive applications including lighting, air-inlet, dashboard devices, and many interior and exterior parts.

General Information	
UL YellowCard	E162447-238275
Features	Good Moldability
	Good Processability
	Good Toughness
	High Flow
	High Impact Resistance
	Low Temperature Impact Resistance
Uses	Automotive Applications
	Automotive Exterior Parts
	Automotive Interior Parts
	Lighting Applications
Forms	Pellets
Processing Method	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Density			
--	1.16	g/cm ³	ISO 1183/B
--	1160	kg/m ³	ISO 1183 ¹
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	14	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.30 to 0.70	%	ASTM D955
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20 to 0.60	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	105	MPa	DIN 53459
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2350	MPa	ISO 527-2/1, ISO 527-2 3 ²
Tensile Stress			
Yield	58.0	MPa	ISO 527-2/5

Yield	57.0	MPa	ISO 527-2 ³
Break	53.0	MPa	ISO 527-2/5
Tensile Strain			
Yield	5.0	%	ISO 527-2/5
Yield	4.8	%	ISO 527-2 ⁴
Break	> 80	%	ISO 527-2/5
Nominal strain at break	> 50	%	ISO 527-2 ⁵
Flexural Modulus	2200	MPa	ISO 178
Flexural Stress ⁶	85.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
-40°C	15	kJ/m ²	ISO 179
0°C	26	kJ/m ²	ISO 179
23°C	35	kJ/m ²	ISO 179
-30°C	15.0	kJ/m ²	ISO 179/1eA ⁷
23°C	35.0	kJ/m ²	ISO 179/1eA ⁸
Charpy Unnotched Impact Strength			
-40°C	No Break		ISO 179
23°C	No Break		ISO 179, ISO 179/1eU ⁹
-30°C	No Break		ISO 179/1eU ¹⁰
Notched Izod Impact Strength			ISO 180
-40°C	50	kJ/m ²	
23°C	70	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	130	°C	ISO 75-2/B
0.45 MPa	130	°C	ISO 75-2 ¹¹
1.8 MPa, Unannealed	110	°C	ISO 75-2/A
1.8 MPa	110	°C	ISO 75-2 ¹²
Vicat Softening Temperature			
--	145	°C	ISO 306/A120
--	132	°C	ISO 306/B50
50°C/h, B (50N)	132	°C	ISO 306 ¹³
CLTE - Flow (0 to 80°C)	7.5E-5 to 8.0E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.20	W/m/K	ASTM C177
Flammability	Nominal Value	Unit	Test Method
Flame Rating ¹⁴ (1.60 mm)	HB		Internal Method
Burning Behav. at 1.6mm nom. thickn. (1.60 mm, UL)	HB		ISO 1210 ¹⁵
Oxygen Index ¹⁶	21	%	ASTM D2863, ISO 4589-2 ³ 17
NOTE			

1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
3.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
6.	1.0 mm/min
7.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
8.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
9.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
16.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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