

PULSE™ EXT 100

PC/ABS Engineering Resin

Trinseo

Message:

PULSE EXT 100 engineering resin has been designed to provide excellent processability, high heat resistance, and high impact strength at both room and low temperatures.

PULSE EXT 100 engineering resin has been used in automotive exterior trim applications.

General Information			
Features	Good Processability		
	High Heat Resistance		
	High Impact Resistance		
	Low Temperature Impact Resistance		
Uses	Automotive Applications		
	Automotive Exterior Parts		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.14	g/cm ³	ASTM D792
--	1140	kg/m ³	ISO 1183 ¹
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	1.3	g/10 min	ASTM D1238
Melt volume-flow rate (265°C/5.0 kg)	10.0	cm ³ /10min	ISO 1133 ²
Molding Shrinkage - Flow	0.60	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile modulus	2100	MPa	ISO 527-2 ³
Tensile Strength			
Yield ⁴	51.7	MPa	ASTM D638
Yield	54.0	MPa	ISO 527-2 ⁵
Tensile Strain			
Yield	4.8	%	ISO 527-2 ⁶
Break ⁷	80	%	ASTM D638
Nominal strain at break	> 50	%	ISO 527-2 ⁸
Flexural Modulus	2240	MPa	ASTM D790
Flexural Strength (Yield)	82.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy notched impact strength			ISO 179/1eA ⁹
-30°C	24.0	kJ/m ²	
23°C	61.0	kJ/m ²	

Charpy impact strength			ISO 179/1eU ¹⁰
-30°C	No Break		
23°C	No Break		
Notched Izod Impact ¹¹			ASTM D256
-29°C, 3.20 mm	480	J/m	
23°C, 3.20 mm	640	J/m	
Instrumented Dart Impact ¹²			ASTM D3763
-29°C, 3.20 mm, Total Energy	59.9	J	
23°C, 3.20 mm, Total Energy	54.2	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	124	°C	ASTM D648
0.45 MPa	134	°C	ISO 75-2 ¹³
1.8 MPa, Unannealed, 3.20 mm	107	°C	ASTM D648
1.8 MPa	111	°C	ISO 75-2 ¹⁴
Vicat Softening Temperature (50°C/h, B (50N))	133	°C	ISO 306 ¹⁵
CLTE - Flow			
-40 to 82°C	7.2E-5	cm/cm/°C	ASTM D696
--	7.2E-5	cm/cm/°C	ISO 11359-2 ¹⁶
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.02	g/cm ³	
Melt Specific Heat	1980	J/kg/°C	ASTM C351
Melt Thermal Conductivity	0.26	W/m/K	ASTM C177
No Flow Temperature	160	°C	
Ejection Temperature	138	°C	
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.	Type I, 51 mm/min		
5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
6.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
7.	Type I, 51 mm/min		

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.	0.25 mm Notch Depth
12.	3.39 m/sec
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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