

TOTAL Polystyrene Impact 3630

Medium Impact Polystyrene

TOTAL Refining & Chemicals

Message:

POLYSTYRENE IMPACT 3630 is an easy flowing, medium impact polystyrene for injection moulding. This grade offers a good compromise of flow and softening point allowing for the production of large and complex articles at good cycle times. The ease of colouration and good surface finish of this grade give a wide range of applications.

General Information			
UL YellowCard	E472299-102068890		
Features	Fast Molding Cycle		
	Food Contact Acceptable		
	Good Flow		
	Good Surface Finish		
Uses	Business Equipment		
	Toys		
Agency Ratings	EC 1907/2006 (REACH)		
Forms	Pellets		
Processing Method	Injection Molding		
Multi-Point Data	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Density			
--	1.04	g/cm ³	ISO 1183
--	1040	kg/m ³	ISO 1183 ¹
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	15	g/10 min	ISO 1133
Melt volume-flow rate (200°C/5.0 kg)	16.0	cm ³ /10min	ISO 1133 ²
Molding Shrinkage	0.40 to 0.70	%	ISO 294-4
Water Absorption			
23°C, 24 hr	< 0.10	%	ISO 62
Saturation	0.10	%	ISO 62 ³
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	84		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ISO 527-2
Tensile Stress			
Yield	32.0	MPa	ISO 527-2
Break	25.0	MPa	ISO 527-2
Tensile Strain			
Yield	1.5	%	ISO 527-2 ⁴

Break	30	%	ISO 527-2
Nominal strain at break	30	%	ISO 527-2 ⁵
Tensile Creep Modulus (1 hr)	2400	MPa	ISO 899-1 ⁶
Flexural Modulus	2400	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
--	6.0	kJ/m ²	ISO 179/1eA
23°C	6.00	kJ/m ²	ISO 179/1eA ⁷
Notched Izod Impact Strength	6.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, Unannealed	66.0	°C	ISO 75-2/A
1.8 MPa, Annealed	77.0	°C	ISO 75-2/A
1.8 MPa	78.5	°C	ISO 75-2 ⁸
Vicat Softening Temperature			
--	89.0	°C	ISO 306/A50
--	82.0	°C	ISO 306/B50
50°C/h, B (50N)	81.0	°C	ISO 306 ⁹
CLTE			
Flow	9.1E-5	cm/cm/°C	ISO 11359-2
Transverse	9.0E-5	cm/cm/°C	ISO 11359-2 ¹⁰
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
--	> 1.0E+14	ohms	IEC 60093
--	1.0E+13	ohms	IEC 60093 ¹¹
Electric Strength	150	kV/mm	IEC 60243-1
NOTE			
1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		
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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.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.		

7.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
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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.

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