

TOTAL Polystyrene 3241

High Impact Polystyrene
TOTAL Refining & Chemicals

Message:

Polystyrene Impact 3241 is a high molecular weight, high heat resistant polystyrene for extrusion application. It offers good mechanical and thermal properties, that leads to manufacturing of thermoformed articles with good rigidity and toughness with improved performance in environmental stress crack resistance (ESCR).

Applications:

Food Packaging
Improved Cold Impact Strength and Chemical Resistance

General Information			
Features	Rigidity, high		
	High molecular weight		
	Good chemical resistance		
	Heat resistance, high		
	Good toughness		
Uses	Food packaging		
Agency Ratings	EC 1907/2006 (REACH)		
Forms	Particle		
Processing Method	Extrusion		
	Thermoforming		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Apparent Density	0.60	g/cm ³	ASTM D1895
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.0	g/10 min	ASTM D1238, ISO 1133
Spiral Flow ¹	42.0	cm	ASTM D3123
Molding Shrinkage - Flow	0.40 - 0.70	%	ASTM D955
Water Absorption			
24 hr	0.070	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.070	%	ISO 62

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
Grade R, 23°C, Injection Molding	99		ASTM D785
R scale, 23°C	99		ISO 2039-2

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield, 23°C, Injection Molded)	33.0	MPa	ASTM D638, ISO 527-2
Tensile Elongation (Break, 23°C, Injection Molded)	45	%	ASTM D638, ISO 527-2

Flexural Modulus (23°C, Injection Molded)	2300	MPa	ASTM D790, ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C, injection molding	90	J/m	ASTM D256
23°C, injection molding	10	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	103	°C	ISO 306/A50, ASTM D1525 2
CLTE - Flow	9.1E-5	cm/cm/°C	ASTM D696
Heat Distortion			
--	85	°C	ISO 75-2
--	85	°C	ASTM D648
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Dielectric Strength	150	kV/mm	ASTM D149
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	150 - 180	°C	
Cylinder Zone 2 Temp.	170 - 210	°C	
Cylinder Zone 3 Temp.	190 - 230	°C	
Cylinder Zone 4 Temp.	200 - 240	°C	
Extrusion instructions			
Nozzle: 210-250°C			
NOTE			
1.	Mold temperature: 220°C		
2.	速率 A (50°C/h), 压力1 (10N)		

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