TOTAL Polystyrene 4440 (AS)

High Impact Polystyrene

TOTAL Refining & Chemicals

Message:

Polystyrene Impact 4440 is a high flow polystyrene for injection molding application.

It is recommended for manufacturing of articles which require good dimensional stability.

Its high fluidity makes it particularly suitable for molding of large parts and for use with gas injection technique.

Applications:

TV Cover

Office Automation

Electrical and Electronic

General Information				
UL YellowCard	E314268-100036313	E472299-102068893		
Features	Good dimensional stability			
	High liquidity			
Uses	Electrical/Electronic Applications			
	TV housing			
	Business equipment			
Agency Ratings	EC 1907/2006 (REACH)			
Forms	Particle			
Processing Method	Injection molding			
Physical	Nominal Value	Unit	Test Method	
Specific Gravity	1.04	g/cm³	ASTM D792	
Apparent Density	0.60	g/cm³	ASTM D1895	
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	9.0	g/10 min	ASTM D1238, ISO 1133	
Spiral Flow ¹	55.0	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)	29.0	MPa	ASTM D638, ISO 527-2	
Tensile Elongation (Break, 23°C, Injection Molded)	40	%	ASTM D638, ISO 527-2	
Flexural Modulus (23°C, Injection Molded)	2250	MPa	ASTM D790, ISO 178	

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C, injection molding	95	J/m	ASTM D256
23°C, injection molding	11	kJ/m²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	97.0	°C	ISO 306/A50, ASTM D1525 2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Dielectric Strength	150	kV/mm	ASTM D149
Injection	Nominal Value	Unit	
Rear Temperature	150 - 180	°C	
Middle Temperature	160 - 200	°C	
Front Temperature	180 - 220	°C	
Nozzle Temperature	210 - 240	°C	
Injection instructions			
Zone 4 Temperature: 200 to 230°C			
NOTE			
1.	Melt temperature: 220°C		
2.	速率 A (50°C/h), 压 力1 (10N)		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533 Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

