

TOTAL Polystyrene 853S

High Impact Polystyrene
TOTAL Refining & Chemicals

Message:

Polystyrene Compound 853S is a V2 non-halogenated flame retardant, high impact polystyrene for injection molding application. It is recommended for manufacturing of articles which require good dimensional stability.

- Applications:
- TV Cover
 - Office Automation
 - Electrical and Electronic

General Information			
UL YellowCard	E314268-100050917	E472299-102068911	
Additive	Flame retardancy		
Features	Good dimensional stability		
	Impact resistance, high		
	Halogen-free		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
	TV housing		
	Business equipment		
Agency Ratings	EC 1907/2006 (REACH)		
UL File Number	E314268		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.06	g/cm³	ASTM D792
Apparent Density	0.60	g/cm³	ASTM D1895
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	4.0	g/10 min	ASTM D1238, ISO 1133
Spiral Flow ¹	40.0	cm	ASTM D3123
Molding Shrinkage - Flow	0.40 - 0.70	%	ASTM D955
Water Absorption			
24 hr	< 0.10	%	ASTM D570
Equilibrium, 23°C, 50% RH	< 0.10	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
Grade R, 23°C, Injection Molding	93		ASTM D785
R scale, 23°C	93		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method

Tensile Strength (Yield, 23°C, Injection Molded)	28.0	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)	2200	MPa	ASTM D790, ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C, injection molding	64	J/m	ASTM D256
23°C, injection molding	7.0	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	92.0	°C	ISO 306/A50, ASTM D1525 ²
CLTE - Flow	8.9E-5	cm/cm/°C	ASTM D696
Heat Distortion			
--	75	°C	ASTM D648
--	75	°C	ISO 75-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	IEC 60093
Dielectric Strength	160	kV/mm	ASTM D149
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	V-2		UL 94
Injection	Nominal Value	Unit	
Rear Temperature	190 - 210	°C	
Middle Temperature	210 - 230	°C	
Front Temperature	220 - 250	°C	
Nozzle Temperature	250 - 280	°C	
Injection instructions			
Zone 4 Temperature: 250 to 260°C			
NOTE			
1.	Melt temperature: 220°C		
2.	速率 A (50°C/h), 压力1 (10N)		

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