

Styrolution PS 5400/5401

High Impact Polystyrene
INEOS Styrolution Group GmbH

Message:

Styrolution PS 5400/5401 is a High Impact Polystyrene product. It can be processed by injection molding or sheet extrusion and is available in Latin America or North America. Applications of Styrolution PS 5400/5401 include medical/healthcare, caps/lids/closures, containers, kitchenware and packaging.

Characteristics include:

- Flame Rated
- High ESCR (Stress Crack Resistant)
- Impact Resistant
- Low Gloss

General Information			
UL YellowCard	E57787-100082702	E57787-100082703	E57787-100087795
Features	E57787-100332196		
	High ESCR (Stress Crack Resist.)		
	High Impact Resistance		
	Low Gloss		
Uses	Cups		
	Food Containers		
	Food Packaging		
	Lids		
	Medical/Healthcare Applications		
	Sheet		
Agency Ratings	USP Class VI		
UL File Number	E57787		
Forms	Pellets		
Processing Method	Injection Molding		
	Sheet Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Apparent Density			
-- ¹	0.59 to 0.64	g/cm ³	
-- ²	0.62 to 0.67	g/cm ³	
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.70	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (L-Scale)	50		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1860	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	20.3	MPa	ASTM D638
Tensile Elongation (Break)	55	%	ASTM D638
Flexural Modulus	1860	MPa	ASTM D790
Flexural Strength	41.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	140	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Annealed)	83.9	°C	
Vicat Softening Temperature	100	°C	ASTM D1525 ³
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (3.18 mm)	16	kV/mm	ASTM D149
Dielectric Constant (1.00 mm, 1 MHz)	2.50		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94
Optical	Nominal Value		Test Method
Gardner Gloss (60°)	25		ASTM D523
Injection	Nominal Value	Unit	
Processing (Melt) Temp	182 to 277	°C	
Mold Temperature	37.8 to 82.2	°C	
Extrusion	Nominal Value	Unit	
Melt Temperature	182 to 277	°C	
NOTE			
1.	without external lubricant		
2.	with external lubricant		
3.	Rate B (120°C/h), Loading 1 (10 N)		

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