

Styrolution PS 3100/3101

General Purpose Polystyrene
INEOS Styrolution Group GmbH

Message:

Styrolution PS 3100/3101 is a General Purpose Polystyrene product. It can be processed by coextrusion or injection molding and is available in Latin America or North America. Applications of Styrolution PS 3100/3101 include kitchenware, additive/masterbatch, caps/lids/closures and medical/healthcare. Primary characteristic: heat resistant.

General Information	
Features	General Purpose
	Good Flow
	Medium Heat Resistance
Uses	Blending
	Caps
	Disposable Drinkware
	Disposable Tableware
Agency Ratings	USP Class VI
Forms	Pellets
Processing Method	Coextrusion
	Injection Molding

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)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 to 0.70	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	75		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3170	MPa	ASTM D638
Tensile Strength (Yield, 23°C)	44.8	MPa	ASTM D638
Tensile Elongation (Break)	2.0	%	ASTM D638
Flexural Modulus	3310	MPa	ASTM D790
Flexural Strength	84.1	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	21	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method

Deflection Temperature Under Load (1.8 MPa, Annealed)	83.9	°C	
Vicat Softening Temperature	101	°C	ASTM D1525 ³
CLTE - Flow	7.2E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (3.18 mm)	20	kV/mm	ASTM D149
Dielectric Constant (1.00 mm, 1 MHz)	2.50		ASTM D150
Optical	Nominal Value	Unit	Test Method
Refractive Index ⁴	1.590		ASTM D542
Transmittance (550 nm)	88.0 to 90.0	%	ASTM D1003
Optical Density - 400-700 nm avg.	0.0460		
Injection	Nominal Value	Unit	
Processing (Melt) Temp	191 to 274	°C	
Mold Temperature	37.8 to 82.2	°C	
Extrusion	Nominal Value	Unit	
Melt Temperature	191 to 274	°C	
NOTE			
1.	without external lubricant		
2.	with external lubricant		
3.	Rate B (120°C/h), Loading 1 (10 N)		
4.	Sodium D line		

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