



STYRON™ 665

Americas Styrenics LLC - General Purpose Polystyrene

Tuesday, November 5, 2019

General Information

General

Material Status	• Commercial: Active	
Availability	• Latin America	• North America
Features	• Food Contact Acceptable	
Uses	• Film	
Agency Ratings	• FDA 21 CFR 177.1640	
Forms	• Pellets	
Processing Method	• Extrusion	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.04		ASTM D792
Melt Mass-Flow Rate (200°C/5.0 kg)	1.5	g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 8.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	460000	psi	ASTM D638
Tensile Strength (Yield, Injection Molded)	7540	psi	ASTM D638
Tensile Strength (Break, Injection Molded)	7540	psi	ASTM D638
Tensile Elongation (Break, Injection Molded)	3.0	%	ASTM D638
Flexural Modulus (Injection Molded)	465000	psi	ASTM D790
Flexural Strength (Injection Molded)	13100	psi	ASTM D790
Tensile Rupture	7542	psi	ASTM D638
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F, Injection Molded)	0.39	ft-lb/in	ASTM D256
Hardness	Nominal Value	Unit	
Rockwell Hardness (L-Scale)	107		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	208	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed	192	°F	ASTM D648
Vicat Softening Temperature	226	°F	ASTM D1525
CLTE - Flow	5.0E-5	in/in/°F	ASTM D696

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	392 to 419	°F
Middle Temperature	419 to 446	°F
Front Temperature	446 to 473	°F
Nozzle Temperature	446 to 473	°F
Back Pressure	29.0 to 218	psi

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Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	351 to 379	°F
Cylinder Zone 2 Temp.	360 to 399	°F
Cylinder Zone 3 Temp.	370 to 410	°F
Cylinder Zone 4 Temp.	390 to 421	°F
Cylinder Zone 5 Temp.	399 to 430	°F
Adapter Temperature	379 to 450	°F
Melt Temperature	379 to 450	°F
Die Temperature	390 to 450	°F

Extrusion Notes

Polish Rolls: 66 - 104 °C
Head Pressure: 10 - 21 MPA

Notes

¹ Typical properties: these are not to be construed as specifications.