

STYRON™ 487R

High Impact Polystyrene

Americas Styrenics LLC

Message:

STYRON™487R-AMST is a high impact polystyrene with an excellent balance of flow, toughness, stiffness, and heat resistance as compared to other high impact polystyrene resins. It is appropriate for extrusion applications where stiffness and toughness combined with trimability are important. STYRON 487R can be used in deep draw thermoforming and injection molding applications.

General Information	
Features	Rigid, good
	Heat resistance, high
	Good toughness
	Compliance of Food Exposure
Uses	Packaging
	Electrical appliances
	Cover
	Household goods
Agency Ratings	FDA 21 CFR 177.1640
UL File Number	E326906
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	2.8	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 - 0.80	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	108		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	2000	MPa	ASTM D638
Tensile Strength			ASTM D638
Fracture, injection molding	24.0	MPa	ASTM D638
Injection Molding	25.0	MPa	ASTM D638
Tensile Elongation (Break, Injection Molded)	70	%	ASTM D638
Flexural Modulus (Injection Molded)	2000	MPa	ASTM D790
Flexural Strength (Injection Molded)	34.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method

Notched Izod Impact			ASTM D256
23°C, molded	100	J/m	ASTM D256
23°C, injection molding	120	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	89.0	°C	ASTM D648
1.8 MPa, not annealed	79.0	°C	ASTM D648
Vicat Softening Temperature	101	°C	ASTM D1525
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94
Injection	Nominal Value	Unit	
Rear Temperature	218 - 249	°C	
Middle Temperature	218 - 249	°C	
Front Temperature	199 - 213	°C	
Nozzle Temperature	213 - 243	°C	
Mold Temperature	15.6 - 65.6	°C	
Injection Rate	Fast		
Back Pressure	0.200 - 1.20	MPa	
Cushion	6.35	mm	
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	177 - 193	°C	
Cylinder Zone 2 Temp.	182 - 204	°C	
Cylinder Zone 3 Temp.	188 - 210	°C	
Cylinder Zone 4 Temp.	199 - 216	°C	
Cylinder Zone 5 Temp.	204 - 221	°C	
Adapter Temperature	193 - 232	°C	
Melt Temperature	193 - 232	°C	
Die Temperature	199 - 232	°C	
Extrusion instructions			

Zone 6 Temperature: 204 to 221°C Melt Pump, Pipes, Screen Changer Temperature: 193 to 232°C Polish Rolls Temperature: 66 to 104°C Head Pressure: 10 to 21 MPa

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