



STYRON 487R

High Impact Polystyrene Resin

STYRON 487R™ 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.

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|----------------------|---|--|
| Main Characteristics | <ul style="list-style-type: none"> • Toughness • Stiffness | <ul style="list-style-type: none"> • Heat resistance • FDA Compliant⁽¹⁾ • EU-Directive 2002/7/EC Compliant |
| Applications | <ul style="list-style-type: none"> • Appliances • Housewares • Packaging/Disposables | <ul style="list-style-type: none"> • Extrusion • Thermoforming • Injection Molding |

Properties ⁽²⁾	Test Method		S.I.		English		Metric		
	ISO	ASTM	Value	Unit	Value	Unit	Value	Unit	
Physical									
Melt flow rate (200°C / 5 kg)	1133 / 8	D 1238	2.8	g/10 min	2.8	g/10 min	2.8	g/10 min	
Specific Gravity	1183	D 792	1.04		1.04		1.04		
Mold Shrinkage		D 955	0.003-0.007	cm/cm	0.003-0.007	in/in	0.003-0.007	cm/cm	
Thermal									
Vicat Softening Temperature (120°C/hr, 1 kg)	306A	D 1525-B	101	°C	214	°F	101	°C	
Injection Molded Mechanical Properties									
Impact Strength:									
Notched Izod 12.7x3.2 mm (0.5x.125 in) specimen @ 23°C (73°F)	180/4A	D 256	187	J/m	3.5	ft-lb/in	19	kg-cm/cm	
Tensile Properties 12.7x3.2 mm (0.5x0.125 in) specimen:									
Yield Tensile Strength mm/min (0.2 in/min) rate	5	527	D 638	21	MPa	3100	psi	218	kg/cm ²
Ultimate Tensile Strength mm/min (0.2 in/min) rate	5	527	D 638	2	MPa	3700	psi	260	kg/cm ²
Ultimate Elongation mm/min (0.2 in/min) rate	5	527	D 638	57	%	57	%	57	%
Tensile Modulus mm/min (0.2 in/min) rate	5	527	D 638	1950	MPa	285000	psi	20037	kg/cm ²
Flexural Properties 1.3 mm/min (0.05 in/min) rate									
Flexural Strength (3-point)	178	D 790	47	MPa	6800	psi	478	kg/cm ²	
Flexural Modulus (3-point)	178	D 790	2200	MPa	320000	psi	22500	kg/cm ²	
Compression Molded Mechanical Properties									
Notched Izod (0.5x.125 in) specimen @ 23°C (73°F)	180/4A	D 256	101	J/m	1.9	ft-lb/in	10.4	kg-cm/cm	

Technical Information



Tensile Properties 12.7x3.2 mm (0.5x.125 in) specimen:									
Yield Tensile Strength mm/min (0.2 in/min) rate	5	527	D 638	18	MPa	2700	psi	190	kg/cm ²
Ultimate Tensile Strength mm/min (0.2 in/min) rate	5	527	D 638	16	MPa	2300	psi	162	kg/cm ²
Ultimate Elongation mm/min (0.2 in/min) rate	5	527	D 638	49	%	49	%	49	%
Tensile Modulus mm/min (0.2 in/min) rate	5	527	D 638	1685	MPa	246000	psi	17300	kg/cm ²
Flexural Properties 1.3 mm/min (0.05 in/min) rate									
Flexural Strength (3-point)		178	D 790	36	MPa	5200	psi	366	kg/cm ²
Flexural Modulus (3-point)		178	D 790	1890	MPa	276000	psi	19400	kg/cm ²

- (1) When used unmodified for the manufacture of food contact articles, STYRON 487R - High Impact Polystyrene Resin will comply with U.S. FDA 21 CFR 177.1640. Such uses are subject to good manufacturing practices and any other limitations which are part of the statute or regulations. These should be consulted for complete details.
- (2) Typical properties, not to be considered as specification limits

Product Stewardship Americas Styrenics has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Americas Styrenics products – from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

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- use as a critical component in medical devices that support or sustain human life; or
- use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

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