



STYRON 484

High Impact Polystyrene Resin

STYRON™ 484 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 trimmability are important. STYRON 484 is also commonly used for deep draw thermoforming and injection molding.

Main Characteristics

- Toughness
- Stiffness
- Heat resistance
- Complies with  
U.S. FDA 21 CFR 177.1640  
CAN. HPB NO OBJECTION  
Europe EU-Directive 2002/72/EC (See NOTES)

Applications

- Appliances
- Refrigeration
- Housewares
- Packaging/Disposables
- Extrusion
- Thermoforming

**Properties <sup>(1)</sup> Test Method S.I. English Metric**

	ISO	ASTM	Value	Unit	Value	Unit	Value	Unit
<b>Physical</b>								
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	
Linear Thermal Expansion (10 <sup>-5</sup> )	11359	D 696	9.0	cm/cm/°C	5.0	in/in/°F	9.0	cm/cm/°C
Mold Shrinkage		D 955	0.003-0.007	cm/cm	0.003-0.007	in/in	0.003-0.007	cm/cm
<b>Thermal</b>								
Vicat Softening Temperature (120°C/hr, 1 kg)	306A	D 1525-B	101	°C	214	°F	101	°C
Deflection Temperature Under Load (Injection molded)	75A	D 648						
@ 0.45 MPa (66 psi), Unannealed			87	°C	189	°F	87	°C
@ 1.8 MPa (264 psi), Unannealed			74	°C	165	°F	74	°C
<b>Injection Molded Mechanical Properties</b>								
<b>Impact Strength:</b>								
Notched Izod specimen	12.7x3.2 mm (0.5x.125 in)	180/4A D 256						
@ 23°C (73°F)			112	J/m	2.1	ft-lb/in	11.4	kg-cm/cm
@ -18°C (0°F)			64	J/m	1.2	ft-lb/in	6.5	kg-cm/cm
Gardner Impact @ 23°C (73°F)		D 3029	18.1	J	160	in-lb	184	cm-kg
<b>Tensile Properties</b> 12.7x3.2 mm (0.5x0.125 in) specimen:								
Yield Tensile Strength (in/min) rate 527	5 mm/min (0.2)	D 638	19	MPa	2800	psi	197	kg/cm <sup>2</sup>
Ultimate Tensile Strength (in/min) rate	5 mm/min (0.2)	527 D 638	24	MPa	3500	psi	246	kg/cm <sup>2</sup>
Ultimate Elongation (0.2 in/min) rate 527	5 mm/min	D 638	52	%	52	%	52	%
Tensile Modulus (0.2 in/min) rate 527	5 mm/min	D 638	1648	MPa	239000	psi	16802	kg/cm <sup>2</sup>
<b>Flexural Properties</b> 1.3 mm/min (0.05 in/min) rate								
Flexural Strength (3-point)		178 D 790	43	MPa	6200	psi	436	kg/cm <sup>2</sup>
Flexural Modulus (3-point)		178 D 790	1910	MPa	277000	psi	19473	kg/cm <sup>2</sup>
<b>Generic Properties</b>								
Rockwell Hardness, R-scale	2309/2	D 785	95		95		95	



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**Flammability Properties** <sup>(2)</sup>

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UL 94 Classification:

@1.47mm (0.058 in) thickness

HB

HB

HB

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(1) Typical properties, not to be considered as specification limits.

(2) This numerical flame-spread rating is not intended to reflect hazards presented by material under actual fire conditions.

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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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## **Additional Information**

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