

Prospector X5

[Compare this grade to 4 other products.](#)

powered by 

Monday, July 25, 2005

STYRON 487

Dow Plastics - Polystyrene, High Impact

Unit System:

View

Datasheet **Shown Below**

ASTM Data Sheet 

ISO Data Sheet --

CAMPUS® Data Sheet 

Actions

Product Sourcing 

Supplier Portal --

E-mail a Datasheet 

Product Alternatives 

General Information

Product Description

STYRON 487 is a high impact polystyrene with an excellent balance of flow, toughness, stiffness and heat resistance as compared to other HIPS resins. It has excellent deep draw characteristics and has higher impact resistance than STYRON 484. It is appropriate for extrusion applications where stiffness and toughness combined with high contact clarity and trimmability are important but can also be used in injection molding situations. A major use of this product is in appliances and housewares as well as food packaging and disposables applications such as cups, lids and serveware.

General

Material Status	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> Latin America North America
Test Standards Available	<ul style="list-style-type: none"> ASTM ISO 10350
Agency Ratings	<ul style="list-style-type: none"> FDA 21 CFR 177.1640 ¹
Forms	<ul style="list-style-type: none"> Pellets
Processing Method	<ul style="list-style-type: none"> Coextrusion Extrusion Thermoforming

ASTM and ISO Properties ²

Physical	Nominal Value	Unit	Test Method
Density - Specific Gravity	1.04	sp gr 23/23°C	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	3.20	g/10 min	ASTM D1238
Mold Shrink, Linear-Flow	0.0030 to 0.0070	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ³	284000	psi	ASTM D638
Tensile Strength @ Yield ³	3750	psi	ASTM D638
Tensile Strength @ Break ³	3700	psi	ASTM D638
Tensile Elongation @ Brk ³	70	%	ASTM D638
Flexural Modulus ⁴	331000	psi	ASTM D790
Flexural Strength ⁴	6800	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ⁵			ASTM D256
(0 °F, 0.125 in)	1.60	ft-lb/in	
(73 °F, 0.125 in)	3.30	ft-lb/in	
Thermal	Nominal Value	Unit	Test Method
DTUL @66psi - Annealed	192	°F	ASTM D648
DTUL @264psi - Unannealed	168	°F	ASTM D648
Vicat Softening Point	221	°F	ASTM D1525

CAMPUS® Properties ⁶

Rheological properties	Nominal Value	Unit	Test Method
Melt volume-flow rate (200°C/5.0 kg)	0.610	in ³ /10min	ISO 1133
Mechanical properties 23°C/50%/r.h.	Nominal Value	Unit	Test Method
Tensile modulus	292000	psi	ISO 527-1, -2
Yield stress	3190	psi	ISO 527-1, -2
Yield strain	1.3	%	ISO 527-1, -2
Nominal strain at break	> 50.0	%	ISO 527-1, -2
Charpy impact strength (+23°C)	73.8	ft-lb/in ²	ISO 179 /1eU
Charpy impact strength (-30°C)	26.2	ft-lb/in ²	ISO 179 /1eU
Charpy notched impact strength (+23°C)	6.66	ft-lb/in ²	ISO 179 /1eA
Charpy notched impact strength (-30°C)	2.38	ft-lb/in ²	ISO 179 /1eA
Thermal properties	Nominal Value	Unit	Test Method
Temp. of deflection under load (1.80 MPa)	172	°F	ISO 75-1, -2
Temp. of deflection under load (0.45 MPa)	189	°F	ISO 75-1, -2
Vicat softening temperature (50°C/h 50N)	198	°F	ISO 306
Coeff. of linear therm. expansion (parallel)	0.000046	in/in/°F	ISO 11359-1, -2
Other properties	Nominal Value	Unit	Test Method
Density	0.0374	lb/in ³	ISO 1183
Test specimen production	Nominal Value	Unit	Test Method
Processing conditions acc. ISO	ISO 2897-2		
Injection Molding, melt temperature	428	°F	ISO 294
Injection Molding, mold temperature	113	°F	ISO 10724
Injection Molding, injection velocity	8	in/sec	ISO 294

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	350 to 450	°F
Front Temperature	375 to 500	°F
Mold Temperature	70.0 to 150	°F
Injection Pressure	5000 to 40000	psi
Back Pressure	10.0 to 500	psi
Clamp Tonnage	2.0 to 4.0	tons/in ²

Notes

- 1 When used unmodified for the manufacture of food contact articles, STYRON 487 will comply with Food Additive Regulations FDA 21 CFR 177.1640 under the U.S. Food, Drug and Cosmetic Act. 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: these are not to be construed as specifications.
- 3 Type I, 2 in/min
- 4 Type I, 0.05 in/min
- 5 Notch Depth: 10 mil
- 6 Typical properties: these are not to be construed as specifications. Additional CAMPUS® data and disclaimer information may be found on CAMPUS® Data Sheet.



The information presented on this data sheet was acquired by IDES from various sources, including the producer of the material and recognized testing agencies. In some cases, material updates have been integrated directly into the IDES Plastics Database by the material producer utilizing the [Data Maintenance Tool](#). IDES makes substantial efforts to assure the accuracy of this data. However, IDES assumes no responsibility for the data values and urges that upon final material selection, data points are validated with the manufacturer.

IDES - One Source. Plastics Data.

www.ides.com | 800-788-4668 or 307-742-9227 | sales@ides.com