



STYRON A-TECH 1400-AS

Polystyrene Resin

STYRON A-TECH™ 1400-AS polystyrene resin is specially designed to meet the broadest range of electronic applications which use current compact and gas assist injection molding technology, allowing for thinner-wall parts where flow demands are high, while at the same time, maintaining the critical strength required for the industry.

Based on DOW patented technology for the production of high-impact polystyrene (HIPS), STYRON A-TECH resins make it possible to eliminate the typical trade-offs of key properties such as toughness, gloss, stiffness, flow-processability.

Applications

- Television Housings
- Audio
- Printer Housings
- Consumer Goods

Properties ⁽¹⁾	Test Method		S.I.		English		Metric	
	ISO	ASTM	Value	Unit	Value	Unit	Value	Unit
Physical								
Specific Density (@ 23°C)	1183	D 792	1050	kg/m ³	66	Lb/ft ³	1.05	g/cc
Processing								
Spiral Flow Length ⁽²⁾ (220°C / 120 bar)			40	cm	40	Cm	40	cm
Melt flow rate (200°C / 5 kg)	1133/8	D 1238	9.5	g/10 min	9.5	g/10 min	9.5	g/10 min
Thermal								
Vicat Softening Temperature (50°C/hr, 5 kg)	306B	D1525-B	89	°C	192	°F	89	°C
(120°C/hr, 1 kg)	306A	D1525-B	101	°C	214	°F	101	°C
Heat Deflection Temperature (1.8MPa)	75A	D 648	70	°C	158	°F	70	°C
Injection Molded Mechanical Properties								
Impact Strength:								
Notched Izod (73°F) 12.7x3.2 mm (0.5x.125 in) specimen	180/4A	D 256	110	J/m	2.1	Ft-lb/in	11	kg-cm/cm
Charpy (Notched) @ 23°C (73°F)	179/1A		10	kJ/m ²	4.8	ft-lb/in ²	10	kg-cm/cm ²
Tensile Properties (10x4mm)								
Yield Tensile Strength 5 mm/min	527	D 638	20	MPa	2900	psi	205	kg/cm ²
Ultimate Tensile Strength 5 mm/min	527	D 638	19	MPa	2800	psi	200	kg/cm ²
Ultimate Elongation 5 mm/min	527	D 638	45	%	45	%	45	%
Tensile Modulus 5 mm/min (0.2 in/min) rate	527	D 638	2000	MPa	290000	psi	20000	kg/cm ²
Flexural Properties 1.3 mm/min (0.05 in/min) rate								
Flexural Strength (3-point)	178	D 790	38	MPa	5500	psi	390	kg/cm ²
Flexural Modulus (3-point)	178	D 790	2000	MPa	290000	psi	20000	kg/cm ²
Flammability Properties ⁽³⁾								
UL 94 Classification:	UL 94 HB @ 1.47 mm							

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

(2) Spiral Flow length was measured with a nominal wall thickness of 2 mm, with an injection pressure of 120 bar and melt temperature of 220° C.

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



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