

STYRON A-TECH™ 1180

High-Impact Polystyrene Resins

STYRON A-TECH™ 1180 is a high impact polystyrene resin with combination of high gloss, high heat, excellent stiffness and good practical toughness. It is designed for injection molding applications.

Main Characteristics

- High heat
- Good practical toughness
- High gloss
- High stiffness
- UL94 HB
- FDA compliance

* U.S. FDA 21 CFR177.1640

Applications

- Air conditioner
- Refrigerator accessories

Properties	Test Method	Unit	Typical Value
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Physical

Melt Flow Rate (200 deg C/5 kg)	ASTM D1238	g/10 min	3
Density	ASTM D792	g/cm ³	1.04
Mold Shrinkage	ASTM D955	in/in	0.004-0.007
UL 94 Classification @ 1.5 mm			HB

Injection Molded Properties

Mechanical

Yield, Tensile Strength	ASTM D638	psi	4900
Ultimate, Tensile Strength	ASTM D638	psi	4500
Break Elongation	ASTM D638	%	55
Flexural Strength	ASTM D790	psi	8700
Flexural Modulus	ASTM D790	psi	300000
Notched Izod @ 23 deg C	ASTM D256	ft-lb/in	2.0

Compression Molded Properties

Mechanical

Yield Tensile Strength	ASTM D638	psi	4100
Ultimate Tensile Strength	ASTM D638	psi	3100
Break Elongation	ASTM D638	%	30
Flexural Strength	ASTM D790	psi	7300
Flexural Modulus	ASTM D790	psi	261000
Notched Izod @ 23 deg C	ASTM D256	ft-lb/in	1.5

Thermal

Vicat Softening Point	ASTM D1525	deg C	106
Deflection Temperature Under Load @ 1.82 Mpa, unannealed	ASTM D648	deg C	75.0
Deflection Temperature Under Load @ 1.82 Mpa, annealed	ASTM D648	deg C	98.9
CLTE-Flow	ASTM D696	cm/cm/deg C	0.000076

Optical

Gloss (60°)	ASTM D523		97
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Notes

These are typical properties only and are not to be construed as specification. Users should confirm results by their own tests