

STYRON A-TECH™ 1170

High Impact Polystyrene

Americas Styrenics LLC

Message:

STYRON A- TECH™1170 is a high impact polystyrene material. This product is available in North America or Latin America and is processed by extrusion or injection molding.

STYRON A- TECH™The main features of the 1170 are:

- flame retardant/rated flame
- Good processability
- accessible food
- Impact resistance

Typical application areas include:

- sheet
- electrical appliances
- food contact applications

General Information	
UL YellowCard	E326906-100171523
Features	Impact resistance, good
	Workability, good
	Good coloring
	Compliance of Food Exposure
Uses	Electrical appliances
	Sheet
Agency Ratings	FDA 21 CFR 177.1640
UL File Number	E326906
Forms	Particle
Processing Method	Extrusion
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	1.9	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.40 - 0.80	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	103		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (Injection Molded)	1400	MPa	ASTM D638
Tensile Strength			ASTM D638
Fracture, injection molding	29.0	MPa	ASTM D638
Injection Molding	22.0	MPa	ASTM D638

Tensile Elongation (Break, Injection Molded)	75	%	ASTM D638
Flexural Modulus (Injection Molded)	1450	MPa	ASTM D790
Flexural Strength (Injection Molded)	32.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
23°C, molded	75	J/m	ASTM D256
23°C, injection molding	91	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	90.5	°C	ASTM D648
1.8 MPa, not annealed	79.0	°C	ASTM D648
Vicat Softening Temperature	104	°C	ASTM D1525
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Flammability	Nominal Value		Test Method
Flame Rating	HB		UL 94
Injection	Nominal Value	Unit	
Rear Temperature	218 - 249	°C	
Middle Temperature	218 - 249	°C	
Front Temperature	199 - 213	°C	
Nozzle Temperature	213 - 243	°C	
Mold Temperature	15.6 - 65.6	°C	
Injection Rate	Fast		
Back Pressure	0.200 - 1.20	MPa	
Cushion	6.35	mm	
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	177 - 193	°C	
Cylinder Zone 2 Temp.	182 - 204	°C	
Cylinder Zone 3 Temp.	188 - 210	°C	
Cylinder Zone 4 Temp.	199 - 216	°C	
Cylinder Zone 5 Temp.	204 - 221	°C	
Adapter Temperature	193 - 232	°C	
Melt Temperature	193 - 232	°C	
Die Temperature	199 - 232	°C	
Extrusion instructions			
Zone 6 Temperature: 204 to 221°C Melt Pump, Pipes, Screen Changer Temperature: 193 to 232°C Polish Rolls Temperature: 66 to 104°C Head Pressure: 10 to 21 MPa			

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