

Westlake HIPS

High Impact Polystyrene
Westlake Plastics Company

Message:

HIPS is a low cost plastic material that is easy to machine and fabricate. HIPS is often specified for low strength structural applications when impact resistance, machinability, and low cost are required. It is frequently used machining pre-production prototypes since it has excellent dimensional stability and is easy to fabricate, paint and glue. Natural (translucent white) HIPS is FDA compliant for use in food processing applications.

- Applications Include:
- Machined prototypes
 - Low-strength structural components
 - Housings
 - Covers
- Advantages of HIPS:
- Good impact resistance
 - Excellent machinability
 - Good dimensional stability
 - Excellent aesthetic qualities
 - Easy to paint and glue
 - Low cost
 - FDA compliant

General Information			
Features	Food Contact Acceptable		
	Good Dimensional Stability		
	High Impact Resistance		
	Machinable		
	Paintable		
Uses	Housings		
	Structural Parts		
Agency Ratings	FDA Unspecified Rating		
Appearance	Colors Available		
	Translucent		
	White		
Forms	Rod		
	Sheet		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
L-Scale	60		
R-Scale	95		

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1650	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	19.3	MPa	
Break	24.1	MPa	
Tensile Elongation (Break)	52	%	ASTM D638
Flexural Modulus	1910	MPa	ASTM D790
Flexural Strength (Yield)	42.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-18°C	64	J/m	
23°C	110	J/m	
Gardner Impact (23°C)	18.1	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	87.2	°C	
1.8 MPa, Unannealed	73.9	°C	
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Flammability	Nominal Value		Test Method
Flame Rating (1.47 mm)	HB		UL 94

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