

TYPICAL PHYSICAL PROPERTIES

Polystyrene

Property	Test Method	Conditions	Units	Value	
				GPPS	HIPS
Physical					
Relative Density	ISO 1183		g/cm ³	1.05	1.05
Water Absorption	ISO 62	23 °C	%	<0.1	<0.1
Mechanical					
Tensile Strength at Yield	ISO 527		MPa		
Tensile Strength at Break	ISO 527		MPa	55	24
Elongation at Yield					
Elongation at Break	ISO 527		%	3	35
Tensile Modulus of Elasticity					
Flexural Modulus	ISO 178		MPa	3,300	1950
Flexural Strength at Yield	ISO 790		MPa	80	22
Izod Impact Strength	ISO 180a	notched	KJ/m	1.5	10
Charpy Impact Strength	ISO 179/1eA	notched	KJ/m	3	12
Impact Falling Weight					
Rockwell Hardness	ASTM D-785		R Scale	105	65
Thermal					
Service Temperature					
Heat Distortion Temperature	ISO 75	Load: 1.82MPa	°C	76	74
Vicat Softening Temperature	ISO 306	50°C/h 50N	°C	89	90
Coefficient of Thermal Expansion	ASTM D-696		1/°C	8.00E-05	1.00E-04
Thermal Conductivity					
Specific Heat Capacity					
Optical					
Light Transmission	ASTM D-1003		%	90	
Refractive Index	ASTM D-542			1.59	
Yellowness Index					
Haze					
Electrical					
Dielectric Strength	IEC 243/1	23 °C	kV/mm	135	155
Surface Resistivity	IEC 93		Ω	1.0E+13	1.0E+14

Other physical properties and values available on request.

Flammability

Standard	Classification
UL 94	HB