

INEOS Styrolution® 495F

Styrolution PS 495F is a high flow, high impact polystyrene with a good heat resistance and a high stiffness.
High flow HIPS

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	<= 0.10 % @Temperature 23.0 °C	<= 0.10 % @Temperature 73.4 °F	50% RH; ISO 62
Water Absorption at Saturation	<= 0.10 % @Temperature 23.0 °C	<= 0.10 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage	0.0030 - 0.0060 cm/cm	0.0030 - 0.0060 in/in	ISO 294-4
Melt Flow	9.5 g/10 min @Load 5.00 kg, Temperature 200 °C	9.5 g/10 min @Load 11.0 lb, Temperature 392 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	74.0 MPa	10700 psi	ISO 2039-1
Tensile Strength, Yield	26.0 MPa	3770 psi	ISO 527
Elongation at Break	40 %	40 %	ISO 527
Elongation at Yield	1.5 %	1.5 %	ISO 527
Tensile Modulus	2.00 GPa	290 ksi	ISO 527
Flexural Strength	40.0 MPa	5800 psi	ISO 178
Flexural Modulus	2.10 GPa	305 ksi	ISO 178
Izod Impact, Notched (ISO)	13.0 kJ/m²	6.19 ft-lb/in²	ISO 180/A
Charpy Impact Unnotched	13.0 J/cm² @Temperature -30.0 °C	61.9 ft-lb/in² @Temperature -22.0 °F	ISO 179
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179
Charpy Impact, Notched	1.70 J/cm²	8.09 ft-lb/in²	ISO 179

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+18 ohm-cm	>= 1.00e+18 ohm-cm	IEC 60093

Surface Resistance	$\geq 1.00 \times 10^{13} \text{ ohm}$	$\geq 1.00 \times 10^{13} \text{ ohm}$	IEC 60093
Dielectric Constant	2.5 @Frequency 100 Hz	2.5 @Frequency 100 Hz	IEC 60250
Dielectric Strength	155 kV/mm @Thickness 1.50 mm	3940 kV/in @Thickness 0.0591 in	Short Time; IEC 60243-1
Dissipation Factor	0.00040 @Frequency 1e+6 Hz	0.00040 @Frequency 1e+6 Hz	IEC 60250
	0.00040 @Frequency 100 Hz	0.00040 @Frequency 100 Hz	IEC 60250

Thermal Properties	Metric	English	Comments
CTE, linear	100 $\mu\text{m/m}^\circ\text{C}$	55.6 $\mu\text{in/in}^\circ\text{F}$	ISO 11359
Thermal Conductivity	0.170 W/m-K	1.18 BTU-in/hr-ft ² -°F	DIN 52612-1
Deflection Temperature at 0.46 MPa (66 psi)	89.0 °C	192 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	85.0 °C	185 °F	ISO 75
Vicat Softening Point	90.0 °C @Load 5.10 kg	194 °F @Load 11.2 lb	50°C/h; ISO 306
	98.0 °C @Load 1.02 kg	208 °F @Load 2.25 lb	50°C/h; ISO 306

Optical Properties	Metric	English	Comments
Gloss	45 %	45 %	Specular Gloss, 60°; ASTM D 523

Processing Properties	Metric	English	Comments
Melt Temperature	180 - 260 °C	356 - 500 °F	ISO 294
Mold Temperature	10.0 - 60.0 °C	50.0 - 140 °F	ISO 294
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294