

INEOS Styrolution® 4000PG

Novodur Ultra 4000PG is an injection molding grade especially suitable for electroplating, providing enhanced heat resistance.
Information provided by Styrolution

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0050 - 0.0080 cm/cm	0.0050 - 0.0080 in/in	ISO 294-4
Melt Flow	6.0 g/10 min @Load 10.0 kg, Temperature 220 °C	6.0 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	100 MPa	14500 psi	ISO 2039-1
Tensile Strength, Yield	46.0 MPa	6670 psi	ISO 527
Elongation at Yield	3.1 %	3.1 %	ISO 527
Tensile Modulus	2.40 GPa	348 ksi	ISO 527
Flexural Strength	73.0 MPa	10600 psi	ISO 178
Flexural Modulus	2.35 GPa	341 ksi	ISO 178
Izod Impact, Notched (ISO)	10.0 kJ/m ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	ISO 180/A
	23.0 kJ/m ² @Temperature 23.0 °C	10.9 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact, Notched	1.00 J/cm ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	ISO 179
	2.00 J/cm ² @Temperature 23.0 °C	9.52 ft-lb/in ² @Temperature 73.4 °F	ISO 179

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+16 ohm	>= 1.00e+16 ohm	IEC 60093
Dielectric Constant	3.0 @Frequency 100 Hz	3.0 @Frequency 100 Hz	IEC 60250
Dielectric Strength	38.0 kV/mm @Thickness 1.50 mm	965 kV/in @Thickness 0.0591 in	Short Time; IEC 60243-1
Dissipation Factor	0.0065 @Frequency 100 Hz	0.0065 @Frequency 100 Hz	IEC 60250
	0.0085 @Frequency 1e+6 Hz	0.0085 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359
Deflection Temperature at 0.46 MPa (66 psi)	103 °C	217 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	98.0 °C	208 °F	ISO 75
Vicat Softening Point	107 °C @Load 5.10 kg	225 °F @Load 11.2 lb	50°C/h; ISO 306