

INEOS Novodur[®] H604

Categories: Polymer; Thermoplastic; ABS Polymer; Acrylonitrile Butadiene Styrene (ABS), Heat Resistant, Molded
 Material Notes: Novodur H604 is a high heat injection molding grade with enhanced chemical resistance, especially suitable for being painted.

Information provided by Styrolution

Physical Properties	Metric	English	Comments
Density	1.04 g/cc	0.0376 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ISO 294-4
Melt Flow	8.0 g/10 min @Load 10.0 kg, Temperature 220 °C	8.0 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	105 MPa	15200 psi	ISO 2039-1
Tensile Strength, Yield	45.0 MPa	6530 psi	ISO 527
Elongation at Yield	2.6 %	2.6 %	ISO 527
Tensile Modulus	2.40 GPa	348 ksi	ISO 527
Flexural Strength	70.0 MPa	10200 psi	ISO 178
Flexural Modulus	2.40 GPa	348 ksi	ISO 178
Izod Impact, Notched (ISO)	12.0 kJ/m ² @Temperature -30.0 °C	5.71 ft-lb/in ² @Temperature -22.0 °F	ISO 180/A
	21.0 kJ/m ² @Temperature 23.0 °C	9.99 ft-lb/in ² @Temperature 73.4 °F	ISO 180/A
Charpy Impact Unnotched	11.0 J/cm ² @Temperature -30.0 °C	52.3 ft-lb/in ² @Temperature -22.0 °F	ISO 179
	18.0 J/cm ² @Temperature 23.0 °C	85.7 ft-lb/in ² @Temperature 73.4 °F	ISO 179
Charpy Impact, Notched	1.10 J/cm ² @Temperature -30.0 °C	5.23 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+15 ohm-cm	>= 1.00e+15 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Constant	3.0 @Frequency 100 Hz	3.0 @Frequency 100 Hz	IEC 60250
Dielectric Strength	31.0 kV/mm @Thickness 1.50 mm	787 kV/in @Thickness 0.0591 in	Short Time; IEC 60243-1

Dissipation Factor	0.0050 @Frequency 100 Hz	0.0050 @Frequency 100 Hz	IEC 60250
	0.0090 @Frequency 1e+6 Hz	0.0090 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	44.4 $\mu\text{in}/\text{in}\cdot\text{°F}$	ISO 11359
Deflection Temperature at 0.46 MPa (66 psi)	102 °C	216 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	98.0 °C	208 °F	ISO 75
Vicat Softening Point	102 °C @Load 5.10 kg	216 °F @Load 11.2 lb	50°C/h; ISO 306

Processing Properties	Metric	English	Comments
Melt Temperature	220 - 260 °C	428 - 500 °F	ISO 294
Mold Temperature	70.0 °C	158 °F	ISO 294
Injection Velocity	240 mm/sec	9.45 in/sec	ISO 294
Drying Temperature	80.0 °C @Time 7200 - 14400 sec	176 °F @Time 2.00 - 4.00 hour	