

Styrolution Novodur® 4105 ABS

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

Material Notes:

Novodur Ultra 4105 is a PC modified high heat injection molding grade with high impact strength. Information provided by Styrolution

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styrolution-Novodur-4105-ABS.php

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0060 - 0.0080 cm/cm	0.0060 - 0.0080 in/in	ISO 294-4
Melt Flow	9.0 g/10 min	9.0 g/10 min	ISO 1133
	@Load 10.0 kg, Temperature 220 Â°C	@Load 22.0 lb, Temperature 428 Â°F	
	12 g/10 min	12 g/10 min	ISO 1133
	@Load 5.00 kg, Temperature 260 Â°C	@Load 11.0 lb, Temperature 500 Â°F	

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	85.0 MPa	12300 psi	ISO 2039-1
Tensile Strength, Yield	45.0 MPa	6530 psi	ISO 527
Elongation at Yield	3.7 %	3.7 %	ISO 527
Tensile Modulus	2.00 GPa	290 ksi	ISO 527
Flexural Strength	70.0 MPa	10200 psi	ISO 178
Flexural Modulus	2.00 GPa	290 ksi	ISO 178
Izod Impact, Notched (ISO)	34.0 kJ/mÂ²	16.2 ft-lb/inÂ²	ISO 180/A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	42.0 kJ/mÂ²	20.0 ft-lb/inÂ²	ISO 180/A
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Charpy Impact, Notched	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	ISO 179
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	4.00 J/cmÂ²	19.0 ft-lb/inÂ²	ISO 179

Mechanical Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	90.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	50.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359
Deflection Temperature at 0.46 MPa (66 psi)	108 $\text{Å}^\circ\text{C}$	226 $\text{Å}^\circ\text{F}$	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	99.0 $\text{Å}^\circ\text{C}$	210 $\text{Å}^\circ\text{F}$	ISO 75
Vicat Softening Point	106 $\text{Å}^\circ\text{C}$ @Load 5.10 kg	223 $\text{Å}^\circ\text{F}$ @Load 11.2 lb	50 $\text{Å}^\circ\text{C}/\text{h}$; ISO 306

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	IEC 60093
Dielectric Constant	3.0 @Frequency 100 Hz	3.0 @Frequency 100 Hz	IEC 60250
Dielectric Strength	37.0 kV/mm @Thickness 1.50 mm	940 kV/in @Thickness 0.0591 in	Short Time; IEC 60243-1
Dissipation Factor	0.0040 @Frequency 100 Hz	0.0040 @Frequency 100 Hz	IEC 60250
	0.0085 @Frequency 1.00e+6 Hz	0.0085 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	230 - 270 $\text{Å}^\circ\text{C}$	446 - 518 $\text{Å}^\circ\text{F}$	ISO 294
Mold Temperature	70.0 $\text{Å}^\circ\text{C}$	158 $\text{Å}^\circ\text{F}$	ISO 294
Injection Velocity	240 mm/sec	9.45 in/sec	ISO 294
Drying Temperature	80.0 $\text{Å}^\circ\text{C}$ @Time 7200 - 14400 sec	176 $\text{Å}^\circ\text{F}$ @Time 2.00 - 4.00 hour	

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