



Product Data Sheet & General Processing Conditions

RTP 681 HB
Acrylonitrile Butadiene Styrene
(ABS)
Carbon Fiber
UL94 HB


The RTP 680 HB are carbon fiber reinforced ABS. These materials offer a good combination of physical properties, stiffness and the ability to be fabricated to close dimensional tolerances.

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	10 %	10 %	
Specific Gravity	1.08	1.08	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0010 - 0.0020 in/in	0.10 - 0.20 %	D 955
Water Absorption, 24 hrs @ 23°C	0.180 %	0.180 %	D 570

MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	1.0 ft-lbs/in	53 J/m	D 256
unnotched 1/8 in (3.2 mm) section	5.0 ft-lbs/in	267 J/m	D 4812
Tensile Strength	13000 psi	90 MPa	D 638
Tensile Elongation	1.8 %	1.8 %	D 638
Tensile Modulus	1.10 x 10 ⁶ psi	7584 MPa	D 638
Flexural Strength	17000 psi	117 MPa	D 790
Flexural Modulus	1.00 x 10 ⁶ psi	6895 MPa	D 790
Hardness			
Rockwell, R	108	108	D 785

ELECTRICAL

Volume Resistivity	< 1E5 ohm.cm	< 1E5 ohm.cm	D 257
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THERMAL

Deflection Temperature			
@ 264 psi (1820 kPa)	220 °F	104 °C	D 648
@ 66 psi (455 kPa)	225 °F	107 °C	D 648
Ignition Resistance*			
Flammability	HB @ 1/16 in	HB @ 1.5 mm	UL94

PROPERTY NOTES

Data herein is typical and not to be construed as specifications.

Unless otherwise specified, all data listed is for natural or black colored materials. Pigments can affect properties.

* This rating is not intended to reflect hazards of this or any other material under actual fire conditions.

GENERAL PROCESSING FOR INJECTION MOLDING

	English	SI Metric
Injection Pressure	10000 - 15000 psi	69 - 103 MPa
Melt Temperature	400 - 460 °F	204 - 238 °C
Mold Temperature	145 - 185 °F	63 - 85 °C
Drying	2 hrs @ 180 °F	2 hrs @ 82 °C
Moisture Content	0.10 %	0.10 %
Dew Point	0 °F	-18 °C

PROCESSING NOTES

Desiccant Type Dryer Required.