Product Data Sheet &
General Processing Conditions

RTP 205 FR
Nylon 6/6 (PA)
Glass Fiber
Flame Retardant
UL94 V-0

The RTP series of flame retardant, glass fiber reinforced nylon materials are designed to provide the optimal balance of strength, electrical and ignition resistance properties while exhibiting excellent processing characteristics. RTP 205 FR possesses UL94 V-0 certification, as well as a complete range of UL94 elelctrical ratings and RTI assignment required for many EEE applications.

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	30 %	30 %	
Specific Gravity	1.65	1.65	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0015 - 0.0030 in/in	0.15 - 0.30 %	D 955
Water Absorption, 24 hrs @ 23°C	0.600 %	0.600 %	D 570
MECHANICAL			
Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	2.0 ft-lbs/in	107 J/m	D 256
unnotched 1/8 in (3.2 mm) section	16.0 ft-lbs/in	854 J/m	D 4812
Tensile Strength	24500 psi	169 MPa	D 638
Tensile Elongation	2.0 - 3.0 %	2.0 - 3.0 %	D 638
Tensile Modulus	1.73 x 10^6 psi	11928 MPa	D 638
Flexural Strength	36000 psi	248 MPa	D 790
Flexural Modulus	1.56 x 10^6 psi	10756 MPa	D 790
Hardness			
Rockwell, R	118	118	D 785
ELECTRICAL			
Dielectric Strength, S/T, in oil	475 VPM	18.7 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	3.8	3.8	D 150
Dissipation Factor, 1 MHz, Dry	0.0150	0.0150	D 150
Volume Resistivity	> 1E14 ohm.cm	> 1E14 ohm.cm	D 257
THERMAL			
Deflection Temperature			
@ 264 psi (1820 kPa)	420 °F	216 °C	D 648
@ 66 psi (455 kPa)	460 °F	238 °C	D 648
Ignition Resistance*			
Flammability	V-0 @ 0.020 in	V-0 @ 0.5 mm	UL94
Flammability	V-0 @ 1/32 in	V-0 @ 0.8 mm	UL94
Limiting Oxygen Index	34.0 %	34.00 %	D 2863
Glow Wire Ignitability Temperature	775 °C @ 1/32 in	775 °C @ 0.8 mm	IEC 60695-2-13
Glow Wire Flammability Index	960 °C @ 1/32 in	960 °C @ 0.8 mm	IEC 60695-2-12

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 - 18000 psi	69 - 124 MPa
Melt Temperature	530 - 570 °F	277 - 299 °C
Mold Temperature	150 - 225 °F	66 - 107 °C
Drying	4 hrs @ 175 °F	4 hrs @ 79 °C
Moisture Content	0.20 %	0.20 %
Dew Point	0 °F	-18 °C

PROCESSING NOTES

Desiccant Type Dryer Required.