



Product Data Sheet & General Processing Conditions

RTP 1001 FR A Polybutylene Terephthalate (PBT) Glass Fiber Flame Retardant UL94 V-0

RTP 1001 - 1005 FRA are a series of glass fiber reinforced, flame retardant PBT compounds. All are UL94 V-0 certified down to the 1/32" (0.8mm) thickness. These materials exhibit easy flow, excellent physical properties and good processing characteristics.

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Primary Additive	10 %	10 %	
Specific Gravity	1.50	1.50	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0070 - 0.0090 in/in	0.70 - 0.90 %	D 955
Water Absorption, 24 hrs @ 23°C	0.070 %	0.070 %	D 570

MECHANICAL

Impact Strength, Izod			
notched 1/8 in (3.2 mm) section	0.6 ft-lbs/in	32 J/m	D 256
unnotched 1/8 in (3.2 mm) section	6.0 ft-lbs/in	320 J/m	D 4812
Tensile Strength	13500 psi	93 MPa	D 638
Tensile Elongation	4.0 - 5.0 %	4.0 - 5.0 %	D 638
Tensile Modulus	0.70 x 10 ⁶ psi	4826 MPa	D 638
Flexural Strength	21000 psi	145 MPa	D 790
Flexural Modulus	0.60 x 10 ⁶ psi	4137 MPa	D 790
Hardness			
Rockwell, R	118	118	D 785

ELECTRICAL

Dielectric Strength, S/T, in oil	485 VPM	19.1 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	3.3	3.3	D 150
Dissipation Factor, 1 MHz, Dry	0.0200	0.0200	D 150
Volume Resistivity	> 1E16 ohm.cm	> 1E16 ohm.cm	D 257

THERMAL

Deflection Temperature			
@ 264 psi (1820 kPa)	340 °F	171 °C	D 648
@ 66 psi (455 kPa)	380 °F	193 °C	D 648
Ignition Resistance*			
Flammability	V-0 @ 1/32 in	V-0 @ 0.8 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	460 - 520 °F	238 - 271 °C
Mold Temperature	175 - 225 °F	79 - 107 °C

Drying	4 hrs @ 250 °F	4 hrs @ 121 °C
Moisture Content	0.03 %	0.03 %
Dew Point	-20 °F	-29 °C

PROCESSING NOTES

Desiccant Type Dryer Required.

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This information is intended to be used only as a guideline for designers and processors of modified thermoplastics. Because design and processing is complex, a set solution will not solve all problems. Observation on a "trial and error" basis may be required to achieve desired results.

Data are obtained from specimens molded under carefully controlled conditions from representative samples of the compound described herein. Properties may be materially affected by molding techniques applied and by the size and shape of the item molded. No assurance can be implied that all molded articles will have the same properties as those listed.

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