



Product Data Sheet & General Processing Conditions

RTP 227 FR Nylon 6/6 (PA) Mineral Flame Retardant

RTP 227 FR is designed to meet the requirements of V-0 performance in a 1/16 inch thickness. It has lower strength than the RTP series of flame retardant, glass fiber reinforced nylon materials, and is less expensive. It exhibits the same outstanding processing characteristics, with better dimensional stability for parts requiring minimal warpage.

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

PERMANENCE	English	SI Metric	ASTM TEST
Specific Gravity	1.70	1.70	D 792
Molding Shrinkage			
1/8 in (3.2 mm) section	0.0050 - 0.0080 in/in	0.50 - 0.80 %	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	0.5 ft-lbs/in	27 J/m	D 256
unnotched 1/8 in (3.2 mm) section	4.0 ft-lbs/in	214 J/m	D 4812
Tensile Strength	10000 psi	69 MPa	D 638
Tensile Elongation	1.0 - 2.0 %	1.0 - 2.0 %	D 638
Tensile Modulus	1.30 x 10 ⁶ psi	8964 MPa	D 638
Flexural Strength	15000 psi	103 MPa	D 790
Flexural Modulus	1.10 x 10 ⁶ psi	7584 MPa	D 790
Hardness			
Rockwell, R	118	118	D 785

ELECTRICAL

Dielectric Strength, S/T, in oil	400 VPM	15.7 kV/mm	D 149
Dielectric Constant, 1 MHz, Dry	4.1	4.1	D 150
Dissipation Factor, 1 MHz, Dry	0.0170	0.0170	D 150
Volume Resistivity	> 1E15 ohm.cm	> 1E15 ohm.cm	D 257

THERMAL

Deflection Temperature			
@ 264 psi (1820 kPa)	300 °F	149 °C	D 648
@ 66 psi (455 kPa)	440 °F	227 °C	D 648
Ignition Resistance*			
Flammability**	V-0 @ 1/16 in	V-0 @ 1.5 mm	D 3801
Limiting Oxygen Index**	34.0 %	34.00 %	D 2863

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.

** Values per RTP Company testing.

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
Dew Point

0.20 %
0 °F

0.20 %
-18 °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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RTP COMPANY • 580 EAST FRONT STREET • WINONA, MN 55987 • 507-454-6900