



Product Data Sheet & General Processing Conditions

RTP 199 X 70836 B Polypropylene (PP) Long Glass Fiber Chemically Coupled

PROPERTIES & AVERAGE VALUES OF INJECTION MOLDED SPECIMENS

| PERMANENCE | English | SI Metric | ASTM TEST |
|--|-----------------------|---------------|--------------|
| Primary Additive | 50 % | 50 % | |
| Specific Gravity | 1.33 | 1.33 | D 792 |
| Molding Shrinkage 1/8 in (3.2 mm) section | 0.0010 - 0.0030 in/in | 0.10 - 0.30 % | D 955 |

MECHANICAL

| | | | |
|--|----------------------------|-------------|--------|
| Impact Strength, Izod notched 1/8 in (3.2 mm) section | 5.0 ft-lbs/in | 267 J/m | D 256 |
| unnotched 1/8 in (3.2 mm) section | 16.0 ft-lbs/in | 854 J/m | D 4812 |
| Tensile Strength | 20000 psi | 138 MPa | D 638 |
| Tensile Elongation | 1.5 - 2.5 % | 1.5 - 2.5 % | D 638 |
| Tensile Modulus | 1.70 x 10 ⁶ psi | 11722 MPa | D 638 |
| Flexural Strength | 31000 psi | 214 MPa | D 790 |
| Flexural Modulus | 1.60 x 10 ⁶ psi | 11032 MPa | D 790 |

ELECTRICAL

| | | | |
|---------------------------------|--------|--------|-------|
| Dielectric Constant, 1 MHz, Dry | 2.8 | 2.8 | D 150 |
| Dissipation Factor, 1 MHz, Dry | 0.0044 | 0.0044 | D 150 |

THERMAL

| | | | |
|--|--------------|-------------|-------|
| Deflection Temperature @ 264 psi (1820 kPa) | 315 °F | 157 °C | D 648 |
| Ignition Resistance* Flammability** | HB @ 1/16 in | HB @ 1.5 mm | D 635 |

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 - 15000 psi | 69 - 103 MPa |
| Melt Temperature | 440 - 500 °F | 227 - 260 °C |
| Mold Temperature | 90 - 150 °F | 32 - 66 °C |
| Drying | 2 hrs @ 175 °F | 2 hrs @ 79 °C |

PROCESSING NOTES

Use a reverse barrel profile. To maximize fiber length, the following injection barrel, screw, and tip designs should be followed. L/D ratio 16/1 - 22/1, Compression ratio 2:1, Flight depth 0.200 in (5 mm) minimum, in feed section, Screw diameter 0.65 - 0.80 in (16.5 - 20

mm) minimum, Compression section length 12 - 13 diameters, Check ring valve assembly - free flow type no restrictions, Nozzle orifice 0.250 in (6 mm) diameter. Feed throat from hopper to machine must have sufficient opening to prevent bridging of long pellet composition.

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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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