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## 3220

### 20 MELT FLOW HIGH IMPACT COPOLYMER FOR INJECTION MOLDING

#### Product Description and Applications:

Pinnacle Polymers Polypropylene 3220 is made via UNIPOL™ PP technology, which utilizes gas-phase fluidized bed reactors with a high activity catalyst system to ensure uniform physical properties and lot-to-lot consistency.

This product is intended for injection molding of automotive and consumer product applications. Also contains a long term heat aging additive system.

#### Features:

The 3220 product provides:

- Excellent balance of stiffness and high impact strength
- Excellent long term heat aging properties
- Excellent color and processing stability
- Superior weld-line strength

Pinnacle's 3220 polypropylene is covered under US FDA Food Contact Notification 864. As such, this polymer can be used in contact with all food types under Conditions of Use A-H, as described in 21 CFR 176.170, Tables 1 and 2. This polymer also complies with 21 CFR 177.1520(c), items 3.1(a) and 3.2(a).

### Typical Properties

Property	Traditional Units	SI Units	ASTM Test
Melt Flow Rate	20 g/10 min.	20 g/10 min.	D1238 <sup>1</sup>
Density at 23°C	0.9 g/cm <sup>3</sup>	900 kg/m <sup>3</sup>	D1505
Shrinkage	0.014 in/in	0.014 mm/mm	D955
Heat Deflection Temperature at 0.455 MPa (66psi)	202°F	95°C	D648
Tensile yield strength, at 51 mm/min	3500 psi	24.2 MPa	D638 <sup>2</sup>
Yield elongation, at 51 mm/min	7%	7%	D638 <sup>2</sup>
Flexural modulus (1% secant) at 1.27 mm/min	168,000 psi	1158 MPa	D790A <sup>2</sup>
Notched Izod impact strength, at 73°F/23°C	2.6 ft-lb/in	139 J/m 14 kJ/m <sup>2</sup>	D256 <sup>2</sup>
Gardner Impact strength at -22°F/-30°C	186 in-lb	20 J	D5420 <sup>3</sup>

<sup>1</sup>Condition L 230/2.16

<sup>2</sup>ASTM Type I specimen, 3.2 mm thick (injection molded per ASTM D4101-92a)

<sup>3</sup>Method G, Geometry GC

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