



P. O. Drawer E  
 Garyville, LA 70051  
 Tel: (985) 535-2000  
 Fax: (985) 535-1234

## 4220H

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

#### Product Description and Applications:

Pinnacle Polymers Polypropylene 4220H 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 flooring, automotive, appliance, lawn and garden products, and industrial applications. Provides an excellent base stock for compounding of filled and reinforced grades.

#### Features:

The 4220H product provides:

- High impact and melt flow
- Superior balance of stiffness and impact strength
- Excellent color and processing stability
- UL Listed

It is characterized by its easy mold flow and high impact at both room and sub-ambient conditions.

Pinnacle's 4220H 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	0.013 in/in	0.013 mm/mm	D955
Heat Deflection Temperature at 0.455 MPa (66psi)	221°F	105°C	D648
Tensile yield strength, at 51 mm/min	3500 psi	24.2 MPa	D638 <sup>2</sup>
Flexural modulus (1% secant) at 1.27 mm/min	160,000 psi	1103 Mpa	D790A <sup>2</sup>
Yield Elongation	6%	6%	D638 <sup>2</sup>
Notched Izod Breaks at 73°F/23°C	100% No-breaks	100% No-breaks	D256 <sup>2</sup>
Notched Izod impact strength, at 73°F/23°C	≥10 ft-lb/in	≥534 J/m	D256 <sup>2</sup>
Gardner Impact strength at -22°F/-30°C	225 in-lb	24.8 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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