



Pinnacle PP 3220

Pinnacle Polymers - Polypropylene Impact Copolymer

Tuesday, November 5, 2019

General Information

Product Description

20 MELT FLOW HIGH IMPACT COPOLYMER FOR INJECTION MOLDING

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.

The 3220 product provides:

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

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).

General

Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Additive	• Heat Stabilizer		
Features	• Food Contact Acceptable • Good Color Stability • Good Processing Stability	• Heat Aging Resistant • Heat Stabilized • High Impact Resistance	• Impact Copolymer • Weldable
Uses	• Automotive Applications	• Consumer Applications	
Agency Ratings	• FDA 21 CFR 176.170 Table 1 & 2, Cond A-H • FDA 21 CFR 177.1520(c) 3.1a	• FDA 21 CFR 177.1520(c) 3.2a • UL Unspecified Rating	
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	0.900	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (230°C/2.16 kg)	20	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.014	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield, 0.126 in, Injection Molded)	3510	psi	ASTM D638
Tensile Elongation ² (Yield, 0.126 in, Injection Molded)	7.0	%	ASTM D638
Flexural Modulus - 1% Secant ³ (0.126 in, Injection Molded)	168000	psi	ASTM D790A
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ⁴ (73°F, 0.126 in, Injection Molded)	2.6	ft-lb/in	ASTM D256

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Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Area) ⁴ 73°F, 0.126 in, Injection Molded	6.66	ft·lb/in ²	ASTM D256
Gardner Impact ⁵ (-22°F)	177	in·lb	ASTM D5420
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	203	°F	ASTM D648

Notes

¹ Typical properties: these are not to be construed as specifications.

² Type I, 2.0 in/min

³ Type I, 0.050 in/min

⁴ Type I

⁵ Method G, Geometry GC