



NEW



PINNACLE POLYMERS NEW PRODUCT INTRODUCTION

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Pinnacle Polymers is introducing several new grades of polypropylene that offer improved properties and performance. These grades were specifically developed in order to fill a gap in the current portfolio of products.

Pinnacle 1155C3 is a high melt flow, clarified PP homopolymer with higher stiffness than clarified PP copolymers.

Pinnacle 13120H is a high flow (120 MFR) polypropylene homopolymer that was developed for use in compounding applications. However, this material can also be blended with other PP homopolymers to increase the melt flow for thin wall applications or applications with very long flow length like large thin caps, packaging or storage tubs and bins.

Pinnacle 1335 is a barefoot 35 melt flow PP homopolymer that is not vis-broken and that contains no additives.

Pinnacle 21115H is a high flow polypropylene copolymer that offers a good balance of stiffness and impact performance.

Pinnacle 4108H and **4119H** are 8 and 19 melt flow high impact (no-break) polypropylene copolymers. These grades were developed to have improved cold temperature impact over the more standard no-break copolymer grades of similar melt flow. At -22F the 4108H and 4119H have notched Izod impact of approximately 2 ft-lb/in. These products are used in applications in lawn & garden, recreational vehicles like ATVs and jet skis, freezer packaging, and vehicle bumpers and panels.

Pinnacle 8108H, 8125H, and 8130H were developed to maintain the impact strength of standard impact copolymers while improving the stiffness / flexural modulus. These products can be used in applications where it is desired to have the stiffness of a homopolymer but with improved impact strength. For example, in large totes, packaging for heavy goods and applications requiring good stackability. In applications where homopolymer polypropylene may be susceptible to cracking or stress whitening, these products could be a good alternative. The properties of these new 8000-series products can be a bridge between the properties and performance of homopolymer PP and PP impact copolymers.

Pinnacle 5175C3 is a high melt flow random copolymer PP designed to have better flow, while maintaining or improving the impact strength and stiffness compared to other random copolymers. For example, the 5175C3 has higher flow but better or equal impact strength and flexural modulus than lower melt flow grades while not sacrificing clarity. This product could be used for thin wall packaging applications or to replace lower melt flow grades in order to reduce molding cycle time.



PROPERTY	UNITS	ASTM TEST METHOD	1155C3	13120H	1335	21115H	4108H	4119H	5175C3	8108H	8125H	8130H
Melt Flow Rate (230°C / 2.16kg)	g/10 min	D1238	55	120	35	115	8	19	75	8	25	30
Density	g/cm ³	D1505	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Tensile Strength at Yield (51 mm/min)	psi	D638	5900	5700	5000	3200	2980	2850	3900	3800	4000	4000
Tensile Elongation at Yield (51 mm/min)	%	D638	---	8	10	---	6	6	15	6.5	6	6
Flexural Modulus (1% Secant at 1.27 mm/min)	psi	D790A	300,000	290,000	225,000	178,000	157,000	147,000	150,000	205,000	225,000	235,000
Notched Izod Impact at 73°F	ft-lb/in	D256	0.4	0.4	0.5	1.4	≥10	≥10	1.3	3.2	1.5	1.3
Notched Izod Impact at -4°F	ft-lb/in	D256	---	---	---	---	2.1	2	---	---	---	---
Gardner Impact Strength at -22°F	in-lb.	D5430	---	---	---	140	310	≥312	---	---	---	---
Yellowness Index	---	---	---	---	---	--	---	---	< -5	---	---	---
Haze (1.27mm thickness)	%	---	15	---	---	--	---	---	9	---	70	55

PROCESSING GUIDELINES	UNITS	TEMPERATURE RANGE
Rear Zone Temperature	°F	375 to 400
Center Zone Temperature	°F	385 to 425
Front Zone Temperature	°F	390 to 450
Nozzle Temperature	°F	400 to 450
Melt Temperature Range	°F	400 to 450
Mold Temperature Range	°F	60 to 120