Product Comparison

Technical Data

Product Description	
Geon™ PP5120 A1	The Geon™ family of polypropylene- and polyethylene-based products covers a wide range of applications, markets and performance requirements. Standard grades are compounded with calcium carbonate, glass and talc to provide a desired balance of properties including stiffness, durability, impact resistance and heat resistance. Custom grades are available with features such as UV stabilizers, heat stabilizers, custom color, high impact, etc.
Geon™ PP5120 B4	The Geon™ family of polypropylene- and polyethylene-based products covers a wide range of applications, markets and performance requirements. Standard grades are compounded with calcium carbonate, glass and talc to provide a desired balance of properties including stiffness, durability, impact resistance and heat resistance. Custom grades are available with features such as UV stabilizers, heat stabilizers, custom color, high impact, etc.
Maxxam™ PP5120F B2	Avient's Maxxam™ family of polypropylene- and polyethylene-based products covers a wide range of applications, markets and performance requirements. Standard grades are compounded with calcium carbonate, glass and talc to provide a desired balance of properties including stiffness, durability, impact resistance and heat resistance. Custom grades are available with features such as UV stabilizers, heat stabilizers, custom color, high impact, etc.

General	Geon™ PP5120 A1	Geon™ PP5120 B4	Maxxam™ PP5120F B2
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America	• Europe
Filler / Reinforcement	• Talc\Mineral, 21% Filler by Weight	• Talc\Mineral, 21% Filler by Weight	• Talc, 20% Filler by Weight
Features	• General Purpose • Homopolymer	• General Purpose • Homopolymer	• Chemically Coupled • Good Impact Resistance • Good Processability • Good Processability • Good Stiffness • Heat Stabilized • Medium Flow
Uses	• Automotive Applications • Construction Applications • Consumer Applications • General Purpose • Industrial Applications	• Automotive Applications • Construction Applications • Consumer Applications • General Purpose • Industrial Applications	• Appliances • Automotive Applications • Consumer Applications • General Purpose • Industrial Applications

Product Comparison

General	Geon™ PP5120 A1	Geon™ PP5120 B4	Maxxam™ PP5120F B2
Appearance	• Natural Color	--	• Black
Forms	• Pellets	• Pellets	• Pellets
Processing Method	• Injection Molding	• Injection Molding	• Injection Molding

Physical	Geon™ PP5120 A1	Geon™ PP5120 B4	Maxxam™ PP5120F B2	Unit	Test Method
Density / Specific Gravity					
--	1.05	--	--	g/cm³	ASTM D792
--	--	1.07	--	g/cm³	ISO 1183
--	--	--	1.07	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)					
230°C/2.16 kg	10	--	--	g/10 min	ASTM D1238
230°C/2.16 kg	9.0	--	--	g/10 min	ISO 1183
230°C/2.16 kg	--	9.8	14	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR)	--	12	--	cm³/10min	ISO 1133
Molding Shrinkage					Internal Method
Flow : 2.00 mm	--	--	1.4	%	
Across Flow : 2.00 mm	--	--	1.4	%	
Across Flow	1.0 to 1.2	--	--	%	
Flow	0.90 to 1.1	--	--	%	

Mechanical	Geon™ PP5120 A1	Geon™ PP5120 B4	Maxxam™ PP5120F B2	Unit	Test Method
Tensile Modulus	--	--	2200	MPa	ISO 527-2/1
Tensile Strength					
Yield [3]	33.0	--	--	MPa	ASTM D638
Yield [4]	--	32.0	--	MPa	ISO 527
Yield	32.0	--	--	MPa	ISO 527-2/50
--	--	--	25.0	MPa	ISO 527-2
Tensile Elongation					
Yield [3]	4.0	--	--	%	ASTM D638
Yield	4.0	--	--	%	ISO 527-2/50
Break	--	--	10	%	ISO 527-2/5
Flexural Modulus					
--	2500	--	--	MPa	ASTM D790
--	2520	--	--	MPa	ISO 178
-- [5]	--	2300	--	MPa	ISO 178

Product Comparison

Impact	Geon™ PP5120 A1	Geon™ PP5120 B4	Maxxam™ PP5120F B2	Unit	Test Method
Notched Izod Impact					
23°C, 3.18 mm, Injection Molded	32	--	--	J/m	ASTM D256A
--	--	--	2.5	kJ/m²	ISO 180/A
-40°C	--	2.0	--	kJ/m²	ISO 180
23°C	3.0	2.7	--	kJ/m²	ISO 180

Thermal	Geon™ PP5120 A1	Geon™ PP5120 B4	Maxxam™ PP5120F B2	Unit	Test Method
Heat Deflection Temperature					
0.45 MPa, Unannealed	--	135	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	67.0	70.0	--	°C	ISO 75-2/A
Melting Temperature	--	--	160 to 165	°C	

Flammability	Geon™ PP5120 A1	Geon™ PP5120 B4	Maxxam™ PP5120F B2	Unit	Test Method
Burning Rate	19	--	--	mm/min	ISO 3795
Glow Wire Flammability Index (2.0 mm)	600	--	--	°C	IEC 60695-2-12

Injection	Geon™ PP5120 A1	Geon™ PP5120 B4	Maxxam™ PP5120F B2	Unit
Drying Temperature	80	--	80	°C
Drying Time	1.0	--	1.0 to 2.0	hr
Rear Temperature	--	--	175 to 185	°C
Middle Temperature	--	--	180 to 190	°C
Front Temperature	--	--	185 to 195	°C
Nozzle Temperature	--	--	195 to 200	°C
Processing (Melt) Temp	185 to 220	--	--	°C
Mold Temperature	25 to 55	--	80	°C

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] Typical properties: these are not to be construed as specifications.

[3] Type I, 51 mm/min

[4] 5 mm/min

[5] 2.0 mm/min