



## WPP PP PPH4TF-3

Washington Penn Plastic Co. Inc. - Polypropylene Homopolymer

Wednesday, October 9, 2019

### General Information

#### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Talc, 30% Filler by Weight		
Features	• Homopolymer		
Uses	• Medical/Healthcare Applications		
Forms	• Pellets		

### ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.13	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.50 to 1.2	%	ASTM D955
Water Absorption (24 hr)	0.020	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	33.8	MPa	ASTM D638
Tensile Elongation (Break)	12	%	ASTM D638
Flexural Modulus	3280	MPa	ASTM D790
Flexural Strength (Yield)	51.7	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
23°C, 3.18 mm	35	J/m	
23°C, 6.35 mm	29	J/m	
Unnotched Izod Impact			ASTM D256
23°C, 3.18 mm	360	J/m	
23°C, 6.35 mm	310	J/m	
Gardner Impact (23°C)	1.02	J	ASTM D3029
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	90		
Shore D	74		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	124	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	70.0	°C	

### Processing Information

Injection	Nominal Value	Unit
Drying Temperature	71 to 88	°C
Drying Time	1.0	hr
Rear Temperature	218 to 224	°C

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Injection	Nominal Value	Unit
Middle Temperature	218 to 224	°C
Front Temperature	221 to 227	°C
Nozzle Temperature	227 to 238	°C
Mold Temperature	16 to 49	°C
Injection Pressure	4.14 to 7.58	MPa
Holding Pressure	1.72 to 4.83	MPa
Back Pressure	0.689 to 1.38	MPa
Clamp Tonnage	3.4 to 5.5	kN/cm <sup>2</sup>
Cushion	3.18 to 6.35	mm

### Injection Notes

Injection Speed: 1.5 to 2.5 in/s  
Zone 4 Temperature: 440 to 450°F  
Hot Runner Temperature: 440 to 470°F  
Hydraulic Oil Temperature: 110 to 125°F  
Shot Capacity vs. Barrel Capacity: 2.5 to 4  
Screw Decompression: 0.1 to 0.25 in

### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.