



## WPP PP PPH4CF-2

Washington Penn Plastic Co. Inc. - Polypropylene Homopolymer

Wednesday, October 9, 2019

### General Information

#### Product Description

Grades available with UL recognition for 110° C RTI at 0.120" minimum thickness. Available with antistatic properties. Good wet/dry stabilizer extraction resistance. Available in colors.

Note: Custom colors available upon request.

#### General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Calcium Carbonate, 20% Filler by Weight		
Additive	• Antistatic		
Features	• Extraction Resistant	• Heat Aging Resistant	• Homopolymer
Uses	• Appliances	• General Purpose	
Forms	• Pellets		

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

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.04	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow	1.2 to 1.6	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (Yield)	31.7	MPa	ASTM D638
Tensile Elongation <sup>2</sup> (Break)	250	%	ASTM D638
Flexural Modulus - Tangent	1990	MPa	ASTM D790
Flexural Strength	60.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C, 3.18 mm	29	J/m	
23°C, 3.18 mm	27	J/m	
Unnotched Izod Impact (23°C, 3.18 mm)	1000	J/m	ASTM D256
Gardner Impact			ASTM D3029
-30°C	3.39	J	
23°C	18.1	J	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	98		ASTM D785
Durometer Hardness (Shore D)	77		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	110	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	62.2	°C	

#### Additional Information

Flexural Modulus, ASTM D790, 2% Secant: 281000 psi

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### Processing Information

Injection	Nominal Value	Unit
Drying Temperature	71 to 88	°C
Drying Time	1.0	hr
Rear Temperature	218 to 224	°C
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	0.517 to 1.03	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.

<sup>2</sup> 51 mm/min