



## WPP PP PPH4CF-4

Washington Penn Plastic Co. Inc. - Polypropylene Homopolymer

Wednesday, October 9, 2019

### General Information

#### Product Description

Available in colors with FDA recognition for food packaging applications. Compounds are offered with high gloss. Available in grades recognized by UL for RTI classification of 120°C at .120" minimum thickness. Good balance of ductility and stiffness. It is also offered with extra heat stabilizers or with UV stabilizers for improved weather resistance. Some versions incorporate antistatic additives and all can be color matched to meet styling requirements.

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, 40% Filler by Weight		
Features	• General Purpose	• Homopolymer	
Uses	• Automotive Applications	• Furniture	• Industrial Applications
Forms	• Pellets		

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

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.23	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	1.4 to 1.8	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (Yield)	26.5	MPa	ASTM D638
Tensile Elongation <sup>2</sup> (Break)	46	%	ASTM D638
Flexural Modulus - Tangent	2530	MPa	ASTM D790
Flexural Strength	61.9	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C, 3.18 mm	32	J/m	
23°C, 3.18 mm	44	J/m	
Unnotched Izod Impact (23°C, 3.18 mm)	1400	J/m	ASTM D256
Gardner Impact			ASTM D3029
-30°C	12.9	J	
23°C	18.1	J	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	100		ASTM D785
Durometer Hardness (Shore D)	79		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Unannealed	115	°C	ASTM D648
Deflection Temperature Under Load 1.8 MPa, Unannealed	71.7	°C	ASTM D648

#### Additional Information

Flexural Modulus, ASTM D790, 2% Secant: 256000 psi

# WPP PP PPH4CF-4

## Washington Penn Plastic Co. Inc. - Polypropylene Homopolymer

### 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