

# WPP PP PPH4TF4-Black

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, 38% Filler by Weight		
Additive	• Heat Stabilizer	• UV Stabilizer	
Features	• Heat Stabilized • High Stiffness	• Homopolymer • UV Resistant	
Uses	• Automotive Applications	• Automotive Under the Hood	
Appearance	• Black	• Colors Available	

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

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.23	g/cm <sup>3</sup>	ASTM D792
Density	1.23	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	12	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	12	g/10 min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (Yield)	29.0	MPa	ASTM D638
Tensile Stress			
Yield	30.0	MPa	ISO 527-2/5
Yield	31.0	MPa	ISO 527-2/50
Tensile Strain (Yield)	5.0	%	ISO 527-2/5
Tensile Strain (Break)	8.0	%	ISO 527-2/5
Flexural Modulus <sup>3</sup>	3900	MPa	ASTM D790
Flexural Modulus <sup>4</sup>	3800	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	2.0	kJ/m <sup>2</sup>	ISO 179
Notched Izod Impact (23°C)	24	J/m	ASTM D256
Notched Izod Impact Strength			
-40°C	2.0	kJ/m <sup>2</sup>	ISO 180
23°C	2.0	kJ/m <sup>2</sup>	ISO 180
23°C	3.0	kJ/m <sup>2</sup>	ISO 180/1B
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	132	°C	ISO 75-2/B
Heat Deflection Temperature (0.45 MPa, Annealed)	103	°C	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	87.0	°C	
Heat Deflection Temperature			
1.8 MPa, Unannealed	89.0	°C	ISO 75-2/A
1.8 MPa, Unannealed	83.0	°C	ISO 75-2/Af

### Additional Information

Tested at 23 ± 2°C (73.4 ± 3.6°F) and 50 ± 5% relative humidity unless otherwise noted.

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### Notes

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

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<sup>2</sup> 50 mm/min

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<sup>3</sup> 1.3 mm/min

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<sup>4</sup> 2.0 mm/min