WDF® PA12 120-PHL NC

Polyamide 12

Worldful Polymer (Shanghai) Co., Ltd.

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Technical Data

Product Description

120-PHL is a semi-transparent flexible material. The material has excellent mechanical properties, excellent low temperature toughness, UV resistance, yellowing resistance, hydrolysis resistance.

General

Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet (Chinese) • Technical Datasheet (English)		
Availability	• Asia Pacific		
Features	• Good Flexibility • Good Thermal Stability	• Hydrolysis Resistant • Low Temperature Toughness	• UV Resistant
Uses	• Automotive Applications	• Electrical/Electronic Applications	• Industrial Applications
Appearance	• Clear/Transparent	• Natural Color	
Processing Method	• Injection Molding		

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.03	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (240°C/2.16 kg)	5.0	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	0.80 to 1.2	%	
Across Flow	0.90 to 1.4	%	
Water Absorption (Equilibrium)	0.70	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [3]	25.0	MPa	ASTM D638
Tensile Elongation [3] (Break)	> 100	%	ASTM D638
Flexural Modulus [4]	400	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Unnotched Impact Strength	No Break		ASTM D256
Notched Izod Impact	No Break		ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	95.0	°C	
1.8 MPa, Unannealed	45.0	°C	
Vicat Softening Temperature [5]	125	°C	ASTM D1525 [6]
Melting Temperature	175	°C	ASTM D2133
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+14	ohms·cm	IEC 60093
Electric Strength	34	kV/mm	IEC 60243-1
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
1.6 mm	HB		
3.2 mm	HB		

Injection	Nominal Value	Unit
Drying Temperature	80 to 90	°C
Drying Time	3.0 to 4.0	hr
Rear Temperature	170 to 190	°C
Middle Temperature	190 to 220	°C
Front Temperature	180 to 200	°C
Processing (Melt) Temp	180 to 210	°C

Form No. TDS-403576-en

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Injection	Nominal Value	Unit
Mold Temperature	60 to 80	°C
Injection Rate	Slow-Moderate	
Back Pressure	1.00 to 3.00	MPa

Injection Notes
Processing Temp. Limit <240 °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] 50 mm/min

[4] 20 mm/min

[5] 0.125 in

[6] Rate A (50°C/h)

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Where to Buy

Supplier

Worldful Polymer (Shanghai) Co., Ltd.
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Web: http://www.wdfsh.cn

Distributor

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Web: http://www.wdfsh.cn
Availability: China

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