

## UBE UBESTA® 3035JU5 Plasticized Industrial Grade Nylon 12

Category : Polymer , Thermoplastic , Nylon , Nylon 12

### Material Notes:

Description: UBE UBESTA® Industrial grade Nylon 12  
Comments: ultra flexible, heat resistance  
Information provided by UBE.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_UBE-UBESTA-3035JU5-Plasticized-Industrial-Grade-Nylon-12.php](http://www.lookpolymers.com/polymer_UBE-UBESTA-3035JU5-Plasticized-Industrial-Grade-Nylon-12.php)

Physical Properties	Metric	English	Comments
Density	1.03 g/cc	0.0372 lb/in <sup>3</sup>	ASTM D792
Melt Flow	14 g/10 min @Load 2.16 kg, Temperature 235 °C	14 g/10 min @Load 4.76 lb, Temperature 455 °F	ASTM D1238R

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	54	54	ASTM D2240
Tensile Strength at Break	>= 30.0 MPa	>= 4350 psi	ASTM D638
Tensile Strength, Yield	13.0 MPa	1890 psi	ASTM D638
Elongation at Break	>= 300 %	>= 300 %	ASTM D638
Flexural Strength	11.0 MPa	1600 psi	ASTM D790
Flexural Modulus	0.190 GPa	27.6 ksi	ASTM D790
Izod Impact, Notched	NB	NB	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	160 °C	320 °F	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	105 °C	221 °F	ASTM D648

Processing Properties	Metric	English	Comments
Processing Temperature	230 °C	446 °F	Flange Temperature for T-Die Cast Film Extrusion
Feed Temperature	40.0 °C	104 °F	Injection Molding
Zone 1	190 °C	374 °F	For T-Die Cast Film Extrusion
	200 °C	392 °F	Injection Molding
	230 °C	446 °F	For 8x1 mm Tube Extrusion

Processing Properties	Metric	English	Comments
	210 °C	410 °F	Injection Molding
	225 °C	437 °F	For 8x1 mm Tube Extrusion
Zone 3	220 °C	428 °F	For 8x1 mm Tube Extrusion
	220 °C	428 °F	Injection Molding
	230 °C	446 °F	For T-Die Cast Film Extrusion
Zone 4	215 °C	419 °F	For 8x1 mm Tube Extrusion
	220 °C	428 °F	Injection Molding
Zone 5	210 °C	410 °F	Injection Molding
Die Temperature	230 °C	446 °F	For T-Die Cast Film Extrusion
Mold Temperature	40.0 - 60.0 °C	104 - 140 °F	Injection Molding
Injection Velocity	100 mm/sec	3.94 in/sec	Injection Molding
Die Opening	0.0400 cm	0.0157 in	For T-Die Cast Film Extrusion
Roll Temperature	50.0 °C	122 °F	Chill Roll Temperature for T-Die Cast Film Extrusion
Drying Temperature	80.0 °C	176 °F	Option 1
	100 °C	212 °F	Option 2
	110 °C	230 °F	Option 3
Dry Time	2 - 4 hour	2 - 4 hour	Option 3
	4 - 6 hour	4 - 6 hour	Option 2
	6 - 8 hour	6 - 8 hour	Option 1
Injection Pressure	40.0 - 50.0 MPa	5800 - 7250 psi	Injection Molding (Injection pressure should be increased when molding thin wall parts. Pressure up to 75 bar can be used here.)
Hold Pressure	25.0 - 50.0 MPa	3630 - 7250 psi	Injection Molding
Back Pressure	5.00 MPa	725 psi	Injection Molding
Screw Speed	15 - 76 rpm	15 - 76 rpm	For 8x1 mm Tube Extrusion

Descriptive Properties	Value	Comments
C/R	3-3.5:1	For 8x1 mm Tube Extrusion

Descriptive Properties	Value	Comments
Calibration	9.95 mm	For 8x1 mm Tube Extrusion
Compression Ratio	2.5-3.5:1	Injection Molding
	min 3:1	For 8x1 mm Tube Extrusion
Die Diameter	16 mm	For 8x1 mm Tube Extrusion
Die Width	300 mm	For T-Die Cast Film Extrusion
Extractables	31%	Tolerance (DIN 73378 EtOH 18hr) 2%
Extruder	Barmag, Screw Diameter = 30 mm	For T-Die Cast Film Extrusion
Extruder Characteristics	65 mm screw diameter	For 8x1 mm Tube Extrusion
Film Thickness	60 microns	For T-Die Cast Film Extrusion
Flight Depth in the Feeding Zone	10-15% of Screw Diameter	Injection Molding
Flight Depth in the Metering Zone	5-7% of Screw Diameter	Injection Molding
Haul Off Speed	5 m/min	For T-Die Cast Film Extrusion
Haul Speed	10-55 m/min	For 8x1 mm Tube Extrusion
L/D Ratio	25:1	For 8x1 mm Tube Extrusion
	min 20:1	Injection Molding
Length of Compression Zone	25-45% of total screw length	Injection Molding
	30% of screw length	For 8x1 mm Tube Extrusion
Length of Feeding Zone	20-40% of total screw length	Injection Molding
	30-40% of screw length	For 8x1 mm Tube Extrusion
Length of Metering Zone	30-45% of screw length	For 8x1 mm Tube Extrusion
	35-45% of total screw length	Injection Molding
Mandrel Diameter	12 mm	For 8x1 mm Tube Extrusion
Peripheral screw speed	10 m/min	Injection Molding
Water Temperature	10-18°C	For 8x1 mm Tube Extrusion

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