

UBE NYLON

Technical data

1022B10

UBE INDUSTRIES , LTD

Polyamide Group

Polymers Development Center

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Technical information

UBE NYLON 1022B10 is basic middle viscosity grade.
It contains some lubricant which is originated from vegetable oil.

1. Features

Features of UBE NYLON 1022B10

- 1) Best for middle layer usage
- 2) Good transparency
- 3) Good processability

2. Basic properties

Table 1 Basic properties of 1022B10

Grade		1022B10
Melting point	(°C)	215 - 225
Relative Viscosity *	(-)	3.26 - 3.46
Extractable content	(%)	Max 1.0%
Moisture content	(%)	Max 0.10%

* 96% H₂SO₄ : Conc. 1.0%

3. Flow property

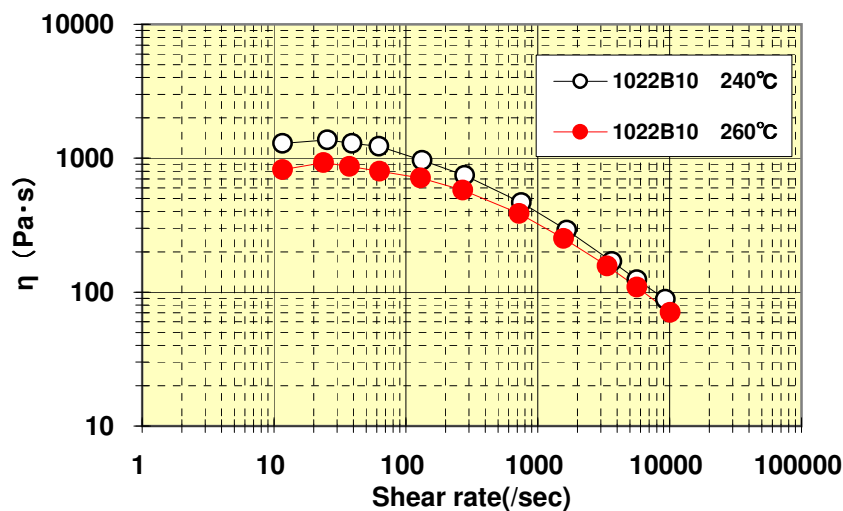


Fig.1 Flow property of UBE NYLON 1022B10

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4. Film properties

4-1 Properties of mono-layer cast film

Table 2 Processing condition of T-die cast film (mono-layer)

Extruder		Plabor ϕ 40mm L/D = 28 , C.R. = 3.3
Die width	(mm)	350
Lip clearance	(mm)	0.4
Chill roll temp.	($^{\circ}$ C)	30
Extrusion Temperature ($^{\circ}$ C)	C1	200
	C2	220
	C3	240
	C4	260
	AD	260
	D	260

Table 3 Film properties of T-Die cast un-oriented film (50 μ m mono-layer)

Item	Unit	Method	1022B10
Tensile strength at yield	MPa	ASTM D-882	30
Tensile strength at break	MPa	ASTM D-882	123
Tensile elongation at break	%	ASTM D-882	560
Tensile modulus	MPa	ASTM D-882	710
Haze	%	ASTM D-1003	0.2
Gloss	%	ASTM D-523	155
Wetting tension	mN/m	JIS K7100	38

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4.2 Properties of oriented film

Table 4 Orientation condition

Orientation machine	Iwamoto-seisakusho BIX-703 (Batch type laboratory orientation machine)
Thickness of un-oriented film	100 μ m
Orientation	Simultaneous
Stretching temp. (°C)	80
Stretching ratio (times)	2.6 x 2.6
Stretching speed (mm/sec)	110
Heat setting temp. (°C)	200
Heat setting time (min)	1

Table 5 Physical properties of T-Die cast oriented film (15 μ m mono-layer)

Item	Unit	Method	1022B10
Tensile strength at break	MPa	ASTM D-882	170
Tensile elongation at break	%	ASTM D-882	126
Tensile modulus	MPa	ASTM D-882	1540
Haze	%	ASTM D-1003	0.2
Gloss	%	ASTM D-523	160

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