Technical Data

UBE NYLON

1026B3X1

UBE Chemicals (Asia) Public Company Limited
98 Sathorn Square Office Tower, 18th Floor,
North Sathorn Road, Silom Sub-district, Bangrak District,
Bangkok 10500, Thailand
Tel: +66 (0) 2206-9300 Fax: +66 (0) 2206-9310
http://www.ube.co.th

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UBE NYLON 1026B3X1 is a general type of polyamide 6 grade with relatively high viscosity which is suitable for film application. It could help to provide the well-balanced performance in process ability and film property.

UBE NYLON 1026B3X1 has been developed as subsequent grade of UBE NYLON 1026B3.

1. Basic properties

Table 1 Basic properties of UBE NYLON 1026B3X1

UBE NYLON 1026B3X1		Test method	Typical value
Melting point	(deg-C)	ISO 11357	220
Viscosity Number *	ml/g	ISO 307	217
Relative Viscosity **	(-)	UBE method	3.63

* 96% H_2SO_4 : Polymer Conc. 0.5% ** 96% H_2SO_4 : Polymer Conc. 1.0%

2. Flow properties

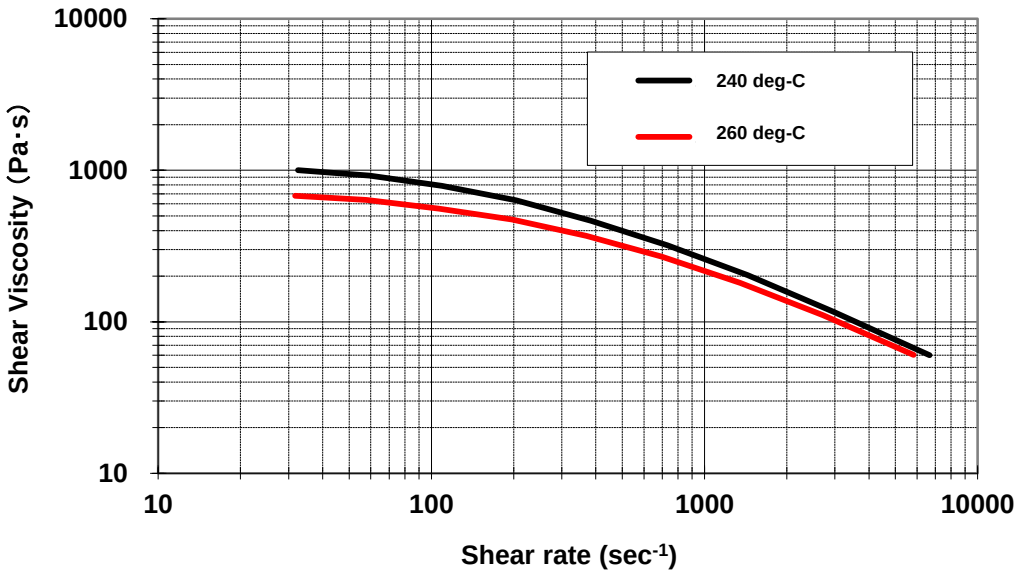

Fig.1 Flow property of UBE NYLON 1026B3X1

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3. Film properties (T-die cast process)

3-1 Properties of mono-layer cast film

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

Extruder		Screw size φ25mm L/D = 25 , C.R. = 3.6
Die width	(mm)	350
Lip clearance	(mm)	0.8
Chill roll temp.	(deg-C)	30
Extrusion Temperature (deg-C)	C1	190
	C2	210
	C3	230
	C4	250
	AD	250
	D	250

Table 3 Physical properties of T-Die cast un-oriented film
(50μm, mono-layer, 23deg-C, 50%RH)

Item	Unit	Method	UBE NYLON 1026B3X1
Tensile strength at break	MPa	ASTM D-882	100
Tensile elongation at break	%	ASTM D-882	450
Tensile modulus	MPa	ASTM D-882	800
Haze	%	ASTM D-1003	< 0.5
Gloss	%	ASTM D-523	155

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4. Film properties (Air cooled blown)

4-1 Properties of multi-layer blown film

Table 4 Typical processing condition of Air cooled 3-layers blown film

Extruder		Screw size φ40mm 3-layers air-blown		
Layer structure		PA (outer) / Tie / LDPE (inner)		
Thickness	(μm)	30 / 5 / 65		
Die diameter	(mm)	90		
Lip clearance	(mm)	0.8		
Blow-up ratio	(-)	2.0		
Extrusion Temperature (deg-C)		Outer	Middle	Inner
	C1	220	170	160
	C2	230	190	180
	C3	250	190	190
	AD	250	200	190
	D	250	250	250

Table 5 Physical properties of Air cooled 3-layer blown un-oriented film (100μm, 3-layers, 23deg-C, 50% RH)

Item	Unit	Method	UBE NYLON 1026B3X1
Tensile strength at break	MPa	ASTM D-882	28
Tensile elongation at break	%	ASTM D-882	350
Tensile modulus	MPa	ASTM D-882	310
Haze	%	ASTM D-1003	23
Gloss	%	ASTM D-523	75