

# *Technical Data*

## **UBE NYLON**

### **5022MT1**

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## Technical information

UBE NYLON 5022MT1 is Copolyamide 6/66 grade with containing monomer. It has been developed for monofilament application such as fishing net, fishing line, etc. The monofilament made by 5022MT1 can show superior performance compared with current grade.

### 1. Features

Features of UBE NYLON 5022MT1

- 1) Excellent softness
- 2) Well balance between line and knot strength
- 3) Good transparency
- 4) Higher drawing ratio (Max. G3/G1 6.0)

### 2. Basic properties

Table 1 Basic properties of UBE NYLON 5022MT1

UBE NYLON 5022MT1		Test method	Typical value
Melting point	(deg-C)	ISO 11357	208
Viscosity Number *	ml/g	ISO 307	191
Relative Viscosity **	( - )	UBE method	3.30

\* 96% H2SO4 : Polymer Conc. 0.5%

\*\* 96% H2SO4 : Polymer Conc. 1.0%

### 3. Flow properties

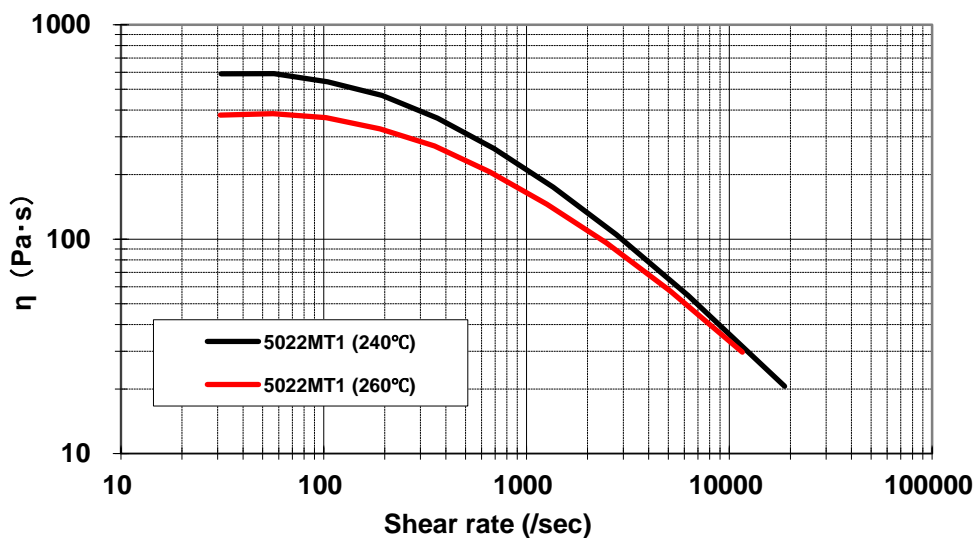


Fig.1 Flow property of UBE NYLON 5022MT1

## Technical information

### 4. Processing condition

Table 2 Typical processing condition of 5022 series.

Extruder		Uniplas, Ø35 mm. L/D = 26, C.R. = 3.3	
Monofilament diameter (mm)		0.3	
Extruder Temperature (deg-C)		C1	245
		C2	255
		C3	260
		AD	250
		D1	250
		D2	240
Quenching bath Temperature (deg-C)		15	
Drawing Temperature (deg-C)		1 <sup>st</sup>	95 (Hot water)
		2 <sup>nd</sup>	160 (Hot air)
		Heat set	160 (Hot air)
Drawing Ratio	1 <sup>st</sup>	G2/G1	3.6
	2 <sup>nd</sup>	G3/G2	1.1 – 1.7
	Total	G3/G1	4.2 – 6.0
Relaxation Ratio		G4/G3	0.97
Line speed (m/min)		G4	28

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### 5. Mechanical properties of 5022MT1

Table 3 Mechanical properties of 5022MT1 at typical processing condition

Grade			UBE NYLON 5022MT1		
Drawing ratio (G3/G1)			4.2	4.5	5.0
Denier		d	679	679	681
Line	Strength	g/d	6.2	6.6	7.7
	Tenacity	Kg	4.2	4.5	5.3
	Elongation	%	68	58	49
Tensile modulus		g/d	11	13	15
Knot	Strength	g/d	5.4	5.9	6.9
	Tenacity	Kg	3.7	4.0	4.8
	Elongation	%	58	54	42

**Remark :** At the analysis of mechanical property, the monofilament was conditioned at 23 deg-C and 50%RH for 7 days.

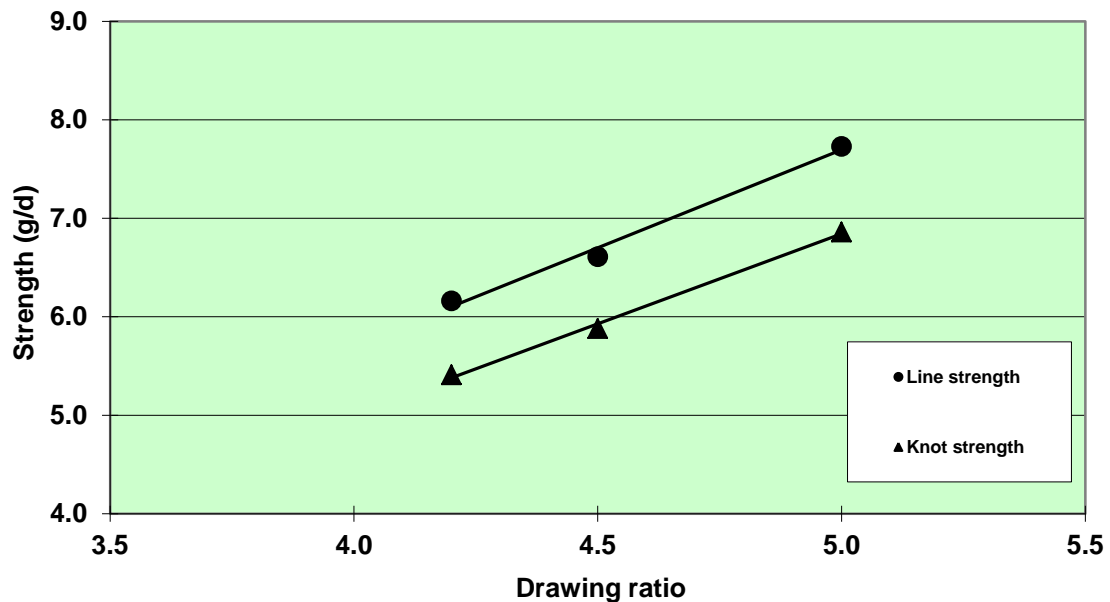


Fig.2 Physical property of 5022MT1 material (line and knot strength).

## Technical information

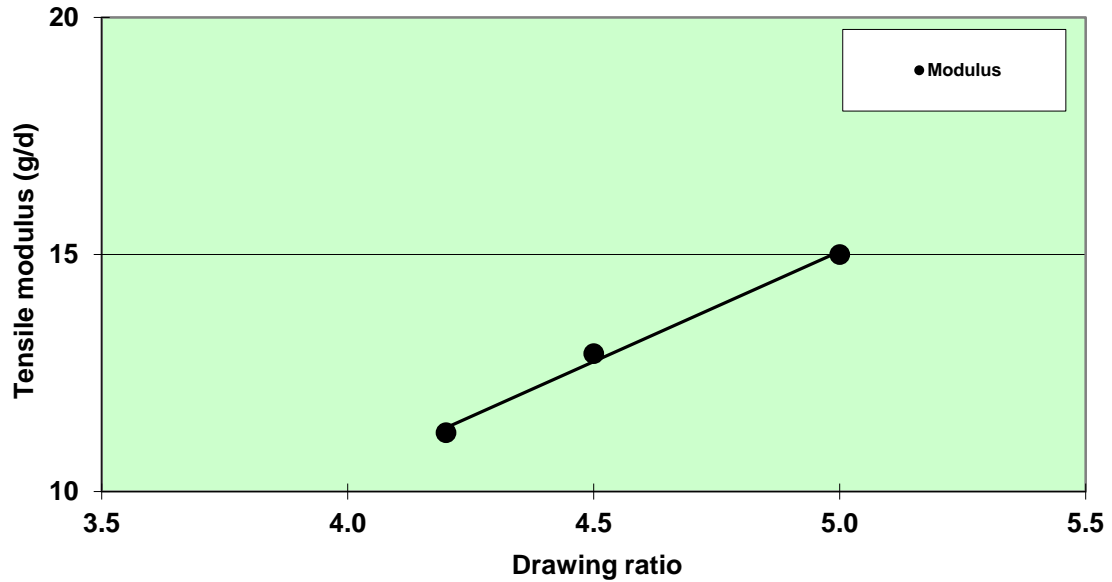


Fig.3 Physical property of 5022MT1 material (modulus)

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