

UBE NYLON 7034T

Technical Product Information: Monofilament properties

UBE NYLON 7034TX is a high viscosity modified Polyamide 6/12 copolymer for monofilament application, suitable for small and large diameter size. The material allows high drawing ratios resulting in superior line strength. This material has the following features:

- Excellent transparency
- Superior line strength and tenacity
- Outstanding processability

Basic Properties ⁽¹⁾	Method	Unit	Value
Polymer	-	-	PA6/12
Melting Point	ISO 11357	°C	201
Relative Viscosity (96% H₂SO₄)	JIS K6810	-	3,86
Density	DIN 53479	g/cm ³	1,14

Mechanical Properties ⁽²⁾	Unit	Value
Mechanical properties of monofilament d = 0,3mm		
Draw ratio (G3/G1)	4,5	5,0
Line	Strength	g/d
	5,0 - 6,0	6,0 - 7,0
	6,0 - 7,0	7,0 - 8,0
	7,0 - 9,5	8,5 - 9,5
	9,0 - 10,0	9,0 - 10,0
	10,0 - 11,0	10,0 - 11,0
	11,0 - 12,0	11,0 - 12,0
	12,0 - 13,0	12,0 - 13,0
	13,0 - 14,0	13,0 - 14,0
	14,0 - 15,0	14,0 - 15,0
	15,0 - 16,0	15,0 - 16,0
	16,0 - 17,0	16,0 - 17,0
	17,0 - 18,0	17,0 - 18,0
	18,0 - 19,0	18,0 - 19,0
	19,0 - 20,0	19,0 - 20,0
	20,0 - 21,0	20,0 - 21,0
	21,0 - 22,0	21,0 - 22,0
	22,0 - 23,0	22,0 - 23,0
	23,0 - 24,0	23,0 - 24,0
	24,0 - 25,0	24,0 - 25,0
	25,0 - 26,0	25,0 - 26,0
	26,0 - 27,0	26,0 - 27,0
	27,0 - 28,0	27,0 - 28,0
	28,0 - 29,0	28,0 - 29,0
	29,0 - 30,0	29,0 - 30,0
	30,0 - 31,0	30,0 - 31,0
	31,0 - 32,0	31,0 - 32,0
	32,0 - 33,0	32,0 - 33,0
	33,0 - 34,0	33,0 - 34,0
	34,0 - 35,0	34,0 - 35,0
	35,0 - 36,0	35,0 - 36,0
	36,0 - 37,0	36,0 - 37,0
	37,0 - 38,0	37,0 - 38,0
	38,0 - 39,0	38,0 - 39,0
	39,0 - 40,0	39,0 - 40,0
	40,0 - 41,0	40,0 - 41,0
	41,0 - 42,0	41,0 - 42,0
	42,0 - 43,0	42,0 - 43,0
	43,0 - 44,0	43,0 - 44,0
	44,0 - 45,0	44,0 - 45,0
	45,0 - 46,0	45,0 - 46,0
	46,0 - 47,0	46,0 - 47,0
	47,0 - 48,0	47,0 - 48,0
	48,0 - 49,0	48,0 - 49,0
	49,0 - 50,0	49,0 - 50,0
	50,0 - 51,0	50,0 - 51,0
	51,0 - 52,0	51,0 - 52,0
	52,0 - 53,0	52,0 - 53,0
	53,0 - 54,0	53,0 - 54,0
	54,0 - 55,0	54,0 - 55,0
	55,0 - 56,0	55,0 - 56,0
	56,0 - 57,0	56,0 - 57,0
	57,0 - 58,0	57,0 - 58,0
	58,0 - 59,0	58,0 - 59,0
	59,0 - 60,0	59,0 - 60,0
	60,0 - 61,0	60,0 - 61,0
	61,0 - 62,0	61,0 - 62,0
	62,0 - 63,0	62,0 - 63,0
	63,0 - 64,0	63,0 - 64,0
	64,0 - 65,0	64,0 - 65,0
	65,0 - 66,0	65,0 - 66,0
	66,0 - 67,0	66,0 - 67,0
	67,0 - 68,0	67,0 - 68,0
	68,0 - 69,0	68,0 - 69,0
	69,0 - 70,0	69,0 - 70,0
	70,0 - 71,0	70,0 - 71,0
	71,0 - 72,0	71,0 - 72,0
	72,0 - 73,0	72,0 - 73,0
	73,0 - 74,0	73,0 - 74,0
	74,0 - 75,0	74,0 - 75,0
	75,0 - 76,0	75,0 - 76,0
	76,0 - 77,0	76,0 - 77,0
	77,0 - 78,0	77,0 - 78,0
	78,0 - 79,0	78,0 - 79,0
	79,0 - 80,0	79,0 - 80,0
	80,0 - 81,0	80,0 - 81,0
	81,0 - 82,0	81,0 - 82,0
	82,0 - 83,0	82,0 - 83,0
	83,0 - 84,0	83,0 - 84,0
	84,0 - 85,0	84,0 - 85,0
	85,0 - 86,0	85,0 - 86,0
	86,0 - 87,0	86,0 - 87,0
	87,0 - 88,0	87,0 - 88,0
	88,0 - 89,0	88,0 - 89,0
	89,0 - 90,0	89,0 - 90,0
	90,0 - 91,0	90,0 - 91,0
	91,0 - 92,0	91,0 - 92,0
	92,0 - 93,0	92,0 - 93,0
	93,0 - 94,0	93,0 - 94,0
	94,0 - 95,0	94,0 - 95,0
	95,0 - 96,0	95,0 - 96,0
	96,0 - 97,0	96,0 - 97,0
	97,0 - 98,0	97,0 - 98,0
	98,0 - 99,0	98,0 - 99,0
	99,0 - 100,0	99,0 - 100,0
	100,0 - 101,0	100,0 - 101,0
	101,0 - 102,0	101,0 - 102,0
	102,0 - 103,0	102,0 - 103,0
	103,0 - 104,0	103,0 - 104,0
	104,0 - 105,0	104,0 - 105,0
	105,0 - 106,0	105,0 - 106,0
	106,0 - 107,0	106,0 - 107,0
	107,0 - 108,0	107,0 - 108,0
	108,0 - 109,0	108,0 - 109,0
	109,0 - 110,0	109,0 - 110,0
	110,0 - 111,0	110,0 - 111,0
	111,0 - 112,0	111,0 - 112,0
	112,0 - 113,0	112,0 - 113,0
	113,0 - 114,0	113,0 - 114,0
	114,0 - 115,0	114,0 - 115,0
	115,0 - 116,0	115,0 - 116,0
	116,0 - 117,0	116,0 - 117,0
	117,0 - 118,0	117,0 - 118,0
	118,0 - 119,0	118,0 - 119,0
	119,0 - 120,0	119,0 - 120,0
	120,0 - 121,0	120,0 - 121,0
	121,0 - 122,0	121,0 - 122,0
	122,0 - 123,0	122,0 - 123,0
	123,0 - 124,0	123,0 - 124,0
	124,0 - 125,0	124,0 - 125,0
	125,0 - 126,0	125,0 - 126,0
	126,0 - 127,0	126,0 - 127,0
	127,0 - 128,0	127,0 - 128,0
	128,0 - 129,0	128,0 - 129,0
	129,0 - 130,0	129,0 - 130,0
	130,0 - 131,0	130,0 - 131,0
	131,0 - 132,0	131,0 - 132,0
	132,0 - 133,0	132,0 - 133,0
	133,0 - 134,0	133,0 - 134,0
	134,0 - 135,0	134,0 - 135,0
	135,0 - 136,0	135,0 - 136,0
	136,0 - 137,0	136,0 - 137,0
	137,0 - 138,0	137,0 - 138,0
	138,0 - 139,0	138,0 - 139,0
	139,0 - 140,0	139,0 - 140,0
	140,0 - 141,0	140,0 - 141,0
	141,0 - 142,0	141,0 - 142,0
	142,0 - 143,0	142,0 - 143,0
	143,0 - 144,0	143,0 - 144,0
	144,0 - 145,0	144,0 - 145,0
	145,0 - 146,0	145,0 - 146,0
	146,0 - 147,0	146,0 - 147,0
	147,0 - 148,0	147,0 - 148,0
	148,0 - 149,0	148,0 - 149,0
	149,0 - 150,0	149,0 - 150,0
	150,0 - 151,0	150,0 - 151,0
	151,0 - 152,0	151,0 - 152,0
	152,0 - 153,0	152,0 - 153,0
	153,0 - 154,0	153,0 - 154,0
	154,0 - 155,0	154,0 - 155,0
	155,0 - 156,0	155,0 - 156,0
	156,0 - 157,0	156,0 - 157,0
	157,0 - 158,0	157,0 - 158,0
	158,0 - 159,0	158,0 - 159,0
	159,0 - 160,0	159,0 - 160,0
	160,0 - 161,0	160,0 - 161,0
	161,0 - 162,0	161,0 - 162,0
	162,0 - 163,0	162,0 - 163,0
	163,0 - 164,0	163,0 - 164,0
	164,0 - 165,0	164,0 - 165,0
	165,0 - 166,0	165,0 - 166,0
	166,0 - 167,0	166,0 - 167,0
	167,0 - 168,0	167,0 - 168,0
	168,0 - 169,0	168,0 - 169,0
	169,0 - 170,0	169,0 - 170,0
	170,0 - 171,0	170,0 - 171,0
	171,0 - 172,0	171,0 - 172,0
	172,0 - 173,0	172,0 - 173,0
	173,0 - 174,0	173,0 - 174,0
	174,0 - 175,0	174,0 - 175,0
	175,0 - 176,0	175,0 - 176,0
	176,0 - 177,0	176,0 - 177,0
	177,0 - 178,0	177,0 - 178,0
	178,0 - 179,0	178,0 - 179,0
	179,0 - 180,0	179,0 - 180,0
	180,0 - 181,0	180,0 - 181,0
	181,0 - 182,0	181,0 - 182,0
	182,0 - 183,0	182,0 - 183,0
	183,0 - 184,0	183,0 - 184,0
	184,0 - 185,0	184,0 - 185,0
	185,0 - 186,0	185,0 - 186,0
	186,0 - 187,0	186,0 - 187,0
	187,0 - 188,0	187,0 - 188,0
	188,0 - 189,0	188,0 - 189,0
	189,0 - 190,0	189,0 - 190,0
	190,0 - 191,0	190,0 - 191,0
	191,0 - 192,0	191,0 - 192,0
	192,0 - 193,0	192,0 - 193,0
	193,0 - 194,0	193,0 - 194,0
	194,0 - 195,0	194,0 - 195,0
	195,0 - 196,0	195,0 - 196,0
	196,0 - 197,0	196,0 - 197,0
	197,0 - 198,0	197,0 - 198,0
	198,0 - 199,0	198,0 - 199,0
	199,0 - 200,0	199,0 - 200,0
	200,0 - 201,0	200,0 - 201,0
	201,0 - 202,0	201,0 - 202,0
	202,0 - 203,0	202,0 - 203,0
	203,0 - 204,0	203,0 - 204,0
	204,0 - 205,0	204,0 - 205,0
	205,0 - 206,0	205,0 - 206,0
	206,0 - 207,0	206,0 - 207,0
	207,0 - 208,0	207,0 - 208,0
	208,0 - 209,0	208,0 - 209,0
	209,0 - 210,0	209,0 - 210,0
	210,0 - 211,0	210,0 - 211,0
	211,0 - 212,0	211,0 - 212,0
	212,0 - 213,0	212,0 - 213,0
	213,0 - 214,0	213,0 - 214,0
	214,0 - 215,0	214,0 - 215,0
	215,0 - 216,0	215,0 - 216,0
	216,0 - 217,0	216,0 - 217,0
	217,0 - 218,0	217,0 - 218,0
	218,0 - 219,0	218,0 - 219,0
	219,0 - 220,0	219,0 - 220,0
	220,0 - 221,0	220,0 - 221,0
	221,0 - 222,0	221,0 - 222,0
	222,0 - 223,0	222,0 - 223,0
	223,0 - 224,0	223,0 - 224,0
	224,0 - 225,0	224,0 - 225,0
	225,0 - 226,0	225,0 - 226,0
	226,0 - 227,0	226,0 - 227,0
	227,0 - 228,0	227,0 - 228,0
	228,0 - 229,0	228,0 - 229,0
	229,0 - 230,0	229,0 - 230,0
	230,0 - 231,0	230,0 - 231,0
	231,0 - 232,0	231,0 - 232,0
	232,0 - 233,0	232,0 - 233,0
	233,0 - 234,0	233,0 - 234,0
	234,0 - 235,0	234,0 - 235,0
	235,0 - 236,0	235,0 - 236,0
	236,0 - 237,0	236,0 - 237,0
	237,0 - 238,0	237,0 - 238,0
	238,0 - 239,0	238,0 - 239,0
	239,0 - 240,0	239,0 - 240,0
	240,0 - 241,0	240,0 - 241,0
	241,0 - 242,0	241,0 - 242,0
	242,0 - 243,0	242,0 - 243,0
	243,0 - 244,0	243,0 - 244,0
	244,0 - 245,0	244,0 - 245,0
	245,0 - 246,0	245,0 - 246,0
	246,0 - 247,0	246,0 - 247,0
	247,0 - 248,0	247,0 - 248,0
	248,0 - 249,0	248,0 - 249,0
	249,0 - 250,0	249,0 - 250,0
	250,0 - 251,0	250,0 - 251,0
	251,0 - 252,0	251,0 - 252,0
	252,0 - 253,0	252,0 - 253,0</td

(1) Measured on base resin
(2) All tests carried out on monofilaments produced with a 35mm screw
Extrusion temperatures between 240-275°C
Quench bath temperature: 15°C
Drawing temperature: 1st = 95°C (hot water); 2nd = 180°C; Heat set = 180°C
Relaxation ratio (G4/G3) = 1; Line speed (G4) = 28 m·min⁻¹
Sample conditioning and testing conditions: T = 23°C, RH = 50%

Processing conditions

		Extruder				Adaptor	Die
		Hopper	Zone 1	Zone 2	Zone 3	Zone 4	
Temperature (°C)	40 - 120	180 - 200	200 - 220	210 - 230	220 - 240	230 - 250	230 - 250
		Quenching bath		1 st drawing	2 nd drawing	Heat setting	
Temperature (°C)	8 - 15		90 - 100		170 - 190	170 - 190	

Drying conditions

UBE NYLON is supplied dry (moisture content < 0,1%) and packed in high barrier films. However, as polyamide is a hygroscopic material, the user should take a special care of the possible moisture absorption once the bag or liner box has been opened. In case of moisture absorption, the material should be dried with dehumidified air at 80°C for more than 4 hours.

Storage

Well-sealed packages could be stored in cool and dry conditions over long periods of time. Protect the packages from heat and direct sunlight to prevent possible damages.

