

MATERIAL DATA SHEET

DK/ 03.2005
EDITION 2

TARNAMID® T-30

Properties	Standard ISO	Test conditions	Unit	Typical Data	
				dry	conditioned
PHYSICAL					
Melting point; DSC	11357-1-3	10°C/min.	°C	221	
Density	1183		g/cm ³	1,14	
Relative viscosity		H2SO4/25°C		3,8	
Viscosity number	307		cm ³ /g	230	
Melt flow index	1133	275°C/5kg	cm ³ /10min	25	
Humidity absorption	62	23°C/50%RH	%	3	
Water absorption	62	23°C/sat.	%	9,5	
Linear shrinkage II/⊥	294-4	60x60x2	%	1,4/1,4	
MECHANICAL					
Yield stress	527-1,-2	50mm/min	MPa	78	45
Nominal strain at break	527-1,-2	50mm/min	%	70	280
Tensile E-modulus	527-1,-2	1mm/min	MPa	2800	1100
Flexural strength	178	2mm/min	MPa	82	28
Flexural modulus	178	2mm/min	MPa	2400	900
Charpy impact strength	179-1	1eU	kJ/m ²	n.p.	n.p.
Charpy notched impact strength	179-1	1eA	kJ/m ²	n.p.	n.p.
Charpy notched impact strength (-30°C)	179-1	1eA	kJ/m ²	6	13
Izod notched impact strength	180		kJ/m ²	3	3
Ball indentation hardness	2039-1	358 N	MPa	4	10
				140	60
THERMAL					
Vicat softening point	306	50N	°C	195	180
Heat deflection temperature	75-1,-2	1,8 MPa	°C	60	50
Coefficient of linear thermal expansion II/⊥	11359-1/-2	23°C - 80°C	E-4/°C	1,1/1,2	
Temperature index T1	IEC 60216	20000 h	°C	70	
		5000 h	°C	85	
Limit of temperature, at few hours operation				≤180	
FLAMMABILITY					
Flammability	UL94	3,2 mm	Class	V2	
Glow wire resistance	IEC-60695-2-12	2 mm	°C	750	
Burning Rate	US-FMVSS 302	d=1	mm/min	+	
ELECTRICAL					
Surface resistivity	IEC 60093		Ω	10 ¹⁵	10 ¹³
Volume resistivity	IEC 60093		Ω/cm	10 ¹⁵	10 ¹²
Dielectric strength	IEC 60243-1	2mm	kV/mm	21	24
Dielectric constant	IEC 60250	1MHz	-	3,5	4,2
Dissipation factor	IEC 60250	1MHz	E-4	220	2000
Comparative tracking index CTI	IEC 60112	solution A	V	600	600
Product nomenclature acc. ISO 1874: PA6, EN, 22-030					

Dry- dry as moulded, moisture content not more than 0,2%

Conditioned - moist after conditioning in standard atmosphere 23°C/50% until saturated

Mechanical properties measured at 23°C unless otherwise stated.

TARNAMID® T-30

CHARACTERISTICS

Tarnamid T-30 there is high viscosity polyamide 6.

APPLICATIONS

- for the manufacture of multilayer or monolayer blown or flat film, used mainly as a barrier packaging in food industry,
- for the manufacture of biaxial oriented multilayer or monolayer artificial casings, used as a packaging in meat industry
- for extrusion of semi-finished goods, like: plates, rods, hollows, profiles
- for the manufacture of thick-walled parts by injection moulding,
- for manufacture small diameters tubes

PROCESSING

Extrusion:

Extruder should be equipped with three-zones screw or special type for polyamide and having following specification: L/D = 24 – 30; compression ratio 3 ÷ 4 : 1; feed zone 8 ÷ 9 D; compression zone 4 ÷ 6 D; dosing zone 8 ÷ 13 D. Screw geometry has essential influence on apparent viscosity of melted polymer. The processing parameters depends on extruder type and its capacity. Extrusion temperature shall be kept in the range 230 ÷ 270 °C, in extreme conditions it should not exceed 290 °C.

Injection moulding:

Melt temperature: 260-280°C,
Injection pressure: 80-110 MPa,
Injection speed: high
Mould temperature: 80 -100°C

DRYING

Tarnamid T-30 is delivered as ready for processing, without need of drying.
If drying necessary there is recommended to use dehumidifier dryer and temperature should not exceed 80 °C. Processing moisture content should be : < 0,10 %,

COLOURS

Colour natural (milky-white, semi-transparent).

RECYCLING

Clean, milled, not contained degraded polymer, postproduction wastes could be reused after mixing with fresh plastic. The addition level of milled scraps may reach up to 10%. It is recommended to use pre-dry milled scraps.

PACKAGING

ALU/PE bags containing net 25 kg of granules and next put to 1000 kg pallets octabins (big-bag containers) containing net 1000 kg of granules directly to tanks or containers

FOOD APPROVAL

Tarnamid T-30 fulfils the requirements of the direct foodstuffs contact by the Commission Directive 2002/72/EC of 6 August 2002 with amending Directive 2004/19/EC of 1March 2004.

The above information is based on our present state of knowledge and is intended to provide general information on our product (s) and its application (s). Therefore it should not be construed as a guarantee of specific properties of the product (s) described herein, and/or its suitability for specific application. The quality of the product (s) is guaranteed in our General Conditions of Sale, and/or Sales Confirmation.