

TECHNICAL QUESTIONNAIRE NC/60/2003

Previous edition NK/22/2000

1. **Name of the product** Trade name: Tarnamid® T
 Technical name: polyamide-6 (PA-6)
 Chemical name: poly-ε-aminocaprolactam

2. **Quality** Quality parameters of Tarnamid® T are set in table 1.

Table 1. Quality parameters of Tarnamid® T

Item	Parameters	Unit	Test method	Tarnamid® T		
				T-27	T-29	T-30
1.	Appearance	—	Granulate, ellipsoidal pellets in milky-white colour, free of impurities			
2.	Relative Viscosity, (solution in 96% w/w sulphuric acid)	—	Company standard ZN-99/ZA-23	2.8 ±0.05 1/	3.3 ±0.05 2/	alternatively 3.8 ±0.10 4.0 ±0.10 3.6 ±0.10 3/
3.	Extractables Content, not more than	% (w/w)	Company standard ZN-99/ZA-23	0.6	0.4	0.3
4.	Water Content, (Karl Fischer method), not more than	% (w/w)	Company standard ZN-99/ZA-23	0.1	0.08	0.08
5.	Tensile Strength at Yield, (dry), not less than	MPa	ISO 527	75	72	72
6.	Flexural Strength, (dry), not less than	MPa	ISO 178	75	72	72
7.	Hardness, (dry), not less than	MPa	ISO 2039-1	130	130	130
8.	Charpy Notched Impact Strength, (dry), not less than	kJ/m ²	ISO 179-1, 1eA	4	4	5
9.	Vicat Softening Temperature (B/50N), (dry), not less than	°C	ISO 306	190	190	190

1/ Tarnamid T-27 can be offered with relative viscosity in the range of 2.5 ÷ 2.9

2/ Tarnamid T-29 can be offered with relative viscosity in the range of 3.0 ÷ 3.4

3/ Tarnamid T-30 can be offered with relative viscosity in the range of 3.5 ÷ 4.1

3. Testing.

Incomplete scope of quality tests include parameters as per items 1÷4 (table 1), used for every production batch of Tarnamid[®] T.

Complete scope of quality tests include testing as per items 1÷9 given in table 1, used for a periodical production control and at a customer request, if agreed with the supplier.

At the customer's request it is possible to carry out some additional tests, if their scope and methods are agreed with the supplier.

4. Packing

Tarnamid[®] T can be packed into following packaging:

- a) into ALU/PE bags of Tarnamid[®] T with net mass 25 kg, loaded up to 1000 kg net mass on pallets,
- b) into big bags, octabines with Tarnamid[®] T net mass from 200 kg to 1200 kg
- c) in bulk directly into tank trucks in nitrogen atmosphere
- d) into liner of multiply foil placed in 20 ft container in nitrogen atmosphere.

On each outer packaging should be placed label containing following information:

- a) name or logo of the producer
- b) name of the product
- c) grade
- d) lot number
- e) net mass.

5. Transport

Tarnamid[®] T in big bags, octabins and ALU/PE bags should be transported in covered means of transport. Protect the bags from damage, moisture and impurities. Tarnamid[®] T is not dangerous acc. to ADR, RID and IMDG regulations.

Transport of Tarnamid[®] T in bulk in tank trucks and containers is done in nitrogen atmosphere.

Note: nitrogen has strangle properties.

6. Storage

Tarnamid[®] T should be stored in closed original packaging of the producer in the storage-rooms, where preferred temperature is 10-30°C and relative humidity maximum 65%.

Tarnamid[®] T transported in tank trucks and containers, directly after unloading should be stored in hermetic tanks in nitrogen or in air atmosphere, with humidity not higher than dew point minus 15°C.

7. Guarantee

The producer guarantees the moisture content in the original packed product for six months since the dispatch date. The other parameters are guaranteed for one year.

Quality of Tarnamid[®] transported in tank trucks and containers is guaranteed till the loading space gets unsealed.

8. Application

Tarnamid[®] T-27 – as a base resin for compounding with glass fibre/glass sphere, minerals, flame retardants, impact modifiers, colorants, etc.

- for the manufacture of parts by injection moulding,
- for the manufacture of carpet fibres,

Tarnamid[®] T-29 - for the manufacture of thin multilayer or monolayer flat and blown film, used as barrier packaging in food industry, especially for meat products,

- for the manufacture of monofilaments,
- for the manufacture of thick-walled parts by injection moulding,
- as a base resin for compounding with glass fibre, minerals, flame retardants, impact modifiers, colorants, grades with better impact strength.

Tarnamid[®] T-30 - 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 of small diameter tubes.

9. Certificates

Tarnamid[®] T-27, T-29, T-30 in natural colour, according to the certificate of National Hygiene Institute (PZH) no. HZ/01293/98 can be used for the manufacture of packaging and goods to be used in contact with food products.

Tarnamid[®] T-27, T-29, T-30 fulfils requirements of Commission Directive 2002/72/EC of August 2002 related to plastics materials and articles intended to come into contact with foodstuffs.

Tarnamid[®] T-27, T-29, T-30 conforms to European Parliament and Council Directive 94/62/EEC of 20 December 1994 on packaging and packaging waste.