

## TECATOR 5013

Chemical Designation :	polyamidimide
DIN–Abbreviation:	PAI
Colours, fillers:	tawny

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### Main features

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### Preferred Fields

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### Applications

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### Properties

<b>Mechanical</b>	<b>dry / moist</b>		<b>standard</b>
Tensile strength at yield	192	MPa	ASTM D 1708
Elongation at yield		%	
Tensile strength at break		MPa	
Elongation at break	15	%	ASTM D 1708
Modulus of elasticity in tension	4900	MPa	ASTM D 1708
Modulus of elasticity after flexural test	5000	MPa	ASTM D 790
Hardness	86		ASTM D 785 (Rockwell)
Impact strength 23° C (Charpy)	142	KJ/m <sup>2</sup>	notched – ASTM D 785 (Rockwell)
Creep rupture strength after 1000 h with static load		MPa	
Time yield limit for 1% elongation after 1000 h		MPa	

Co-efficient of friction  
 $p = 0,05 \text{ N/mm}^2 v=0,6 \text{ m/s}$   
 on steel, hardened and ground

Wear  $\mu\text{m/km}$   
 $p = 0,05 \text{ N/mm}^2 v=0,6 \text{ m/s}$   
 on steel, hardened and ground

Thermal	dry / moist		standard
Crystalline melting point		°C	
Glass transition temperature	275	°C	
Heat distortion temperature HDT, Method A	278	°C	ASTM D 648 (1.8MPa)
Heat distortion temperature HDT, Method B		°C	
Max. service temperature			
short term	270	°C	
long term		°C	
Thermal conductivity (23° C)	0,26	W/(K.m)	ASTM C 177
Specific heat (23° C)	0,24	J/g.K	
Coefficient of thermal expansion (23–55°C)	3,1	$10^{-5} 1/K$	ASTM E 831

## Properties

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<b>Electrical</b>	<b>dry / moist</b>		<b>standard</b>
Dielectric constant ( $10^6$ Hz)	3,9		ASTM D 150
Dielectric loss factor ( $10^6$ Hz)	0,031		ASTM D 150
Specific volume resistance	$>10^{15}$	$\Omega \cdot \text{cm}$	ASTM D 257
Surface resistance	$>10^{18}$	$\Omega$	ASTM D 257
Dielectric strength	23,6	kV/mm	ASTM D 149
Resistance to tracking			

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<b>Miscellaneous</b>	<b>dry / moist</b>		<b>standard</b>
Density	1,42	$\text{g/cm}^3$	ASTM D 792
Moisture absorption (23°C/50RH)	2,5	%	ASTM D 570
Water absorption to equilibrium	4,5	%	ASTM D 570
Flammability acc. to UL standard 94	V0		

The above information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of chemical resistance, of certain properties and the suitability of our products and their applications. Our products are not destined for use in medical and dental implants. Existing commercial patents must be observed. Unless otherwise stated, these values represent averages taken from injection moulding samples, dry as moulded. We reserve the right to make technical alterations.

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