Material Data Sheet

PA6 + PE - Polyamid 6

Chemical designation	Polyamid 6
DIN-Abbreviation	**PA6**
e Designation	**Epramid GPE**
Colours, fillers	Yellow - filler: polyethylen

Mainn features

very tough
resistant to many oils and greases
electrically insulating
wear resistant
good sliding properties
strong
easily machined
éléments absorbeurs de chocs

Prefered Fields

mechanical engineering
transport and conveyor technology
domesctic appliance
agricultural machinery
Packaging and paper processing machinery
automotive engineering
textile machinery
gears, couplings and engine construction
industrie automobile

Chemical resistance

excellent against alcool
resistant against solvents
conditional resistant against acids and bases
resistant to many oils and greases

Technical Datas

Mechanical

	norms	units	datas
Yeld strsess	DIN EN ISO 527	Mpa	80
Flexual strength	DIN 53452	MPa	135
Elongation at yield	DIN EN ISO 527	%	
Elongation at break	DIN 53455	%	
Tensile modulus	DIN EN ISO 527	MPa	2500
Modulus of elasticity in after flexual test		MPa	2800
Hardness $H_{358/30}$	DIN 53456	MPa	140
Impact strength 23°C (Charpy)	DIN EN ISO 179 (Charpy)	KJ/m²	no breack
Notched impact strength	DIN 53453	KJ/m²	>5
Creep rupture (after 1000 h static load)		MPa	
Coefficient of friction p=0,05N/mm² , v=0,6m/s on steel, hardened and ground)			0,18

Thermal

Crystaline melting point		°C	220
Glass transition temperature	DIN 53765	°C	
Heat distorsion temperature (HDT, Method A)	ISO-R75 meth.A (DIN 461)	°C	
Heat distorsion temperature (HDT, Method B)	ISO-R75 meth.B (DIN 461)	°C	
Max service temperature short term long term		 °C °C	 160 -40 up to +105
Thermal conductivity (23°C)		W/(K.m)	0,23
Specific heat (23°C)		J/g.K	
Coefficient of thermal expansion (23 - 60°C)	DIN 53752	10^{-5}1/K	7-8

Electrical

Dielectric constant (10^6 Hz)	DIN 53483 IEC-250		
Dielectric loss factor (10^6 Hz)	DIN 53483 IEC-250		
Specific volume resistance	DIN IEC 60093	W*cm	
Surface resistance	DIN IEC 60093	W	
Dielectreic stength	DIN 53481, IEC-243, VDE 0303 part2	KV/mm	
resistance to tracking	DIN 53480, VDE 0303 part1		

Miscellaneous

Density	DIN 53479	g/cm3	1,14
Moisture absorption (23°C/50RH)	DIN EN ISO 62	%	1,8
Moisture absorption (to equilibrium)	DIN EN ISO 62	%	6
Flamability acc, to UL standard 94			HB

Remq: the second value indicated corresponds to moisture absorption equilibrium