



TECHNYL STAR™ AFX

A game-changing polyamide 6.6 for highly demanding applications

High performance polyamide

- Very high stiffness and dimensional stability
- High strength and impact resistance
- High retention of mechanical properties in temperature

Unmatched flexibility in part design

- Design: very long flow length in injection, for ultimate filling of thin walls and ribs and very large parts
- Aesthetic: excellent surface finish
- Part performance: high weldline resistance (+70% vs standard PA 6.6), less internal stress in part

Exceptional processing conditions

- Very fast cycle time
- Outstanding flowability: +50% vs standard PA 66 GF 50
- Wide processing window: up to -35% injection pressure reduction, and -45°C melt temperature reduction vs standard PA 66 GF 50

A highly competitive solution

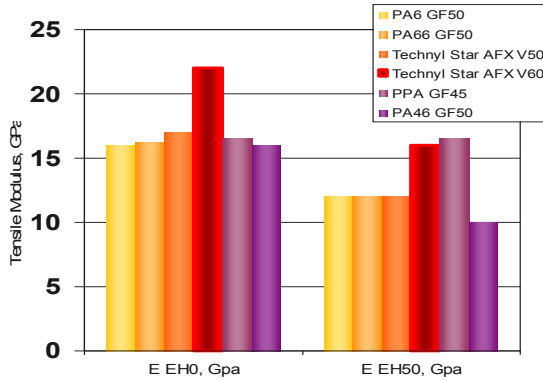
- Vs metal: lower material & processing costs, no post-processing and finishing, no surface treatment, high quality surface finish, longer tool life
- Vs PPA and specialty polyamides: lower material & processing cost, faster cycle time, lower equipment cost
- Vs traditional highly filled PA 6.6: higher reinforcement levels, lower processing cost, wider processing window, increased design flexibility, improved surface finish



Polyamide

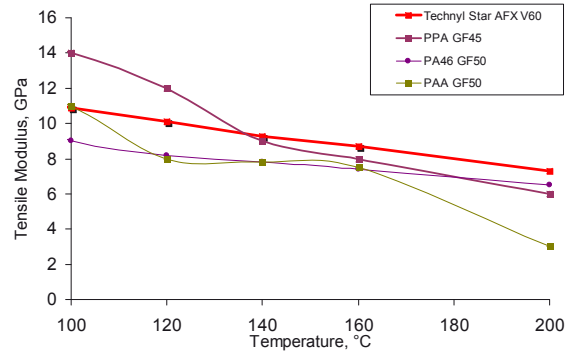
A game-changing polyamide 6.6 for highly demanding applications

High reinforcement levels, resulting in equivalent rigidity than specialty polyamides



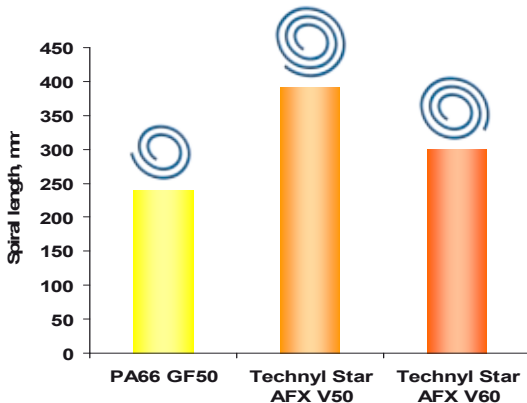
Tensile Modulus – GPa, 23°C, dry as moulded and after conditioning ISO 110

High retention of properties in temperature



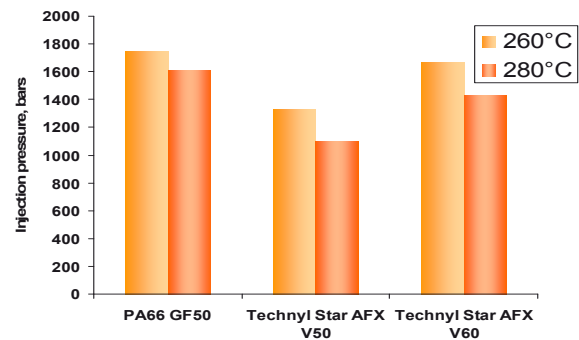
Tensile Modulus – GPa, at various temperature

Outstanding flowability



Spiral test – Melt temperature 180°C, +60% flowability of AFX V50 compared to standard PA 6.6 GF50

Wide processing window



Electric box moulding at various temperature
Up to -35% injection pressure reduction of AFX V50 compared to standard PA 6.6

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PROPERTIES	NORM	UNIT	CONDITIONS	TECHNYL STAR™	
				AFX 218 V50	AFX 218 V60
				Black 31N	Black 31N
PHYSICAL					
Water absorption (24 h at 23°C)	ISO 62	%		0.73	0.60
Density	ISO 1183-A	g/cm ³		1.56	1.69
Molding shrinkage Parallel	RHODIA-EP	%		0.34	0.32
Molding shrinkage normal or perpendicular	RHODIA-EP	%		0.42	0.39
MECHANICAL PROPERTIES					
Tensile modulus	ISO 527 type 1 A	MPa	d.a.m / cond.*	17000 / 12000	22000 / 16000
Tensile strength at break	ISO 527 type 1 A	MPa	d.a.m / cond.*	255 / 180	268 / 195
Flexural modulus	ISO 178	MPa	d.a.m / cond.*	15000 / -	19000 / -
Flexural maximum stress	ISO 178	MPa	d.a.m / cond.*	380 / -	416 / -
Charpy notched impact strength	ISO 179/1eA	kJ/m ²	d.a.m / cond.*	15 / 21	14 / 22
Charpy unnotched impact strength	ISO 179/1eU	kJ/m ²	d.a.m / cond.*	100 / 104	96 / 101
Izod notched impact strength	ISO 180/1A	kJ/m ²	d.a.m / cond.*	17 / 21	18 / 21
Izod unnotched impact strength	ISO 180/1U	kJ/m ²	d.a.m / cond.*	88 / 91	85 / 93
THERMAL					
Melting Temperature	ISO 11357	°C		264	264
Heat deflection temperature, 1.8 Mpa	ISO 75/af	°C		256	256

*d.a.m - dry as moulded / cond. - conditioned according ISO 1110