

What is PA6 G Glide green

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PA 6 G, sliding grade

Glide green is a form-polymerised cast polyamide 6 (PA 6 G) in a special lubricant-enriched compound. Compared to standard PA 6 G, it offers significantly improved sliding and wear properties while retaining high hardness and strength.

Properties

Form-polymerisation produces a high-molecular, semi-crystalline thermoplastic with very good dimensional stability, available in large cross-sections and dimensions.

The embedded lubricant content provides a low coefficient of friction and high abrasion and wear resistance, without significantly reducing the mechanical strength and hardness of the base material.

Advantages

- Very good sliding and wear properties
- High hardness and strength
- Good machinability
- Available in large dimensions

Disadvantages

- Moisture absorption up to 2 % in standard atmosphere
- Reduced strength and dimensional stability in thin-walled parts

Processing

Like other cast polyamides, Glide green can be machined using all conventional cutting methods (sawing, turning, drilling, milling, planing, grinding). As an unreinforced material, HSS tools are sufficient; good cooling via chip removal is important to avoid softening or smearing of the surface caused by heat build-up.

Because our semi-finished products are stress-relieved through annealing, machined parts achieve a high degree of dimensional stability. For high material removal or tight dimensional requirements, an additional intermediate annealing step prior to the final machining step can be beneficial.

Typical Applications

Glide green is preferably used where components need to slide with low friction under load, for example as a sliding element in telescopic crane and equipment booms, where it supports smooth extension through outstanding sliding properties combined with high strength and rigidity.

- Sliding elements in crane and lifting technology
- Sliding and guide parts in mechanical engineering
- Components in the beverage industry

Typical Properties

- Good sliding properties
- Good wear resistance
- High hardness
- High rigidity

Product Examples

- Sliding strips
- Guide rails
- Extension elements for telescopic booms
- Sliding plates

Typical Industries

- Mechanical Engineering
- Beverage Industry
- Crane and Lifting Technology

	Test Method	Unit	Value
General Properties			
Density	DIN EN ISO 1183-1	g / cm ³	1.14
Water absorption	DIN EN ISO 62	%	2.0
Flammability (Thickness 3 mm / 6 mm)	UL 94		HB / HB
Mechanical Properties			
Yield stress	DIN EN ISO 527	MPa	75
Elongation at break	DIN EN ISO 527	%	35
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3400
Notched impact strength	DIN EN ISO 179	kJ / m ²	3.5
Shore hardness	DIN EN ISO 868	scale D	81
Thermal Properties			
Melting temperature	ISO 11357-3	°C	215
Thermal conductivity	DIN 52612-1	W / (m·K)	0.25
Thermal capacity	DIN 52612	kJ / (kg·K)	1.70
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ / K	80
Service temperature, long term	Average	°C	-40 ... 110
Service temperature, short term (max.)	Average	°C	160
Heat deflection temperature	DIN EN ISO 75, Verf. A, HDT	°C	90