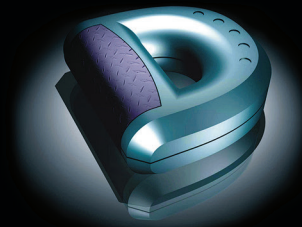


EOS PA 3200 GF GLASS FILLED NYLON 12

PA 3200GF is a whitish, glass-filled polyamide 12 powder, which is characterised by an excellent stiffness in combination with good elongation at break.



Drumlord Limited
Prototyping Technologies

A GLASS FILLED VARIANT OF THE POPULAR PA 2200 SLS MATERIAL. THE ADDITION OF GLASS BEAD FILLER IMPROVES THE STIFFNESS WHEN COMPARED TO STANDARD PA 2200 NYLON 12. A GREAT CHOICE FOR APPLICATIONS WHICH REQUIRE STIFFNESS, HIGH HEAT DISTORTION RESISTANCE AND LOW ABRASIVE WEAR.

A popular option for automotive, particularly under bonnet, aerospace and applications that require advanced engineering thermoplastics. Parts can be dyed a range of colours if required.

CHARACTERISTICS

COLOUR:	White
DENSITY:	1220 kg/m ³
FEATURES:	Low Coefficient of Friction

LASER-SINTERED PARTS MADE FROM PA3200 GF POSSESS EXCELLENT MATERIAL PROPERTIES:

- high stiffness
- high mechanical wear-resistance
- good thermal loadability
- excellent surface quality
- high dimensional accuracy and detail resolution
- excellent long-term constant behaviour

MECHANICAL PROPERTIES

	VALUE	UNIT	TEST STANDARD
Izod Impact notched (23°C)	4.2	kJ/m ²	ISO 180/1A
Izod Impact unnotched (23°C)	21	kJ/m ²	ISO 180/1U
Shore D hardness (15s)	80	-	ISO 868
Ball indentation hardness	98	MPa	ISO 2039-1
Tensile Modulus (X and Y Direction)	3200	MPa	ISO 527-1/-2
Tensile Modulus (Z Direction)	2500	MPa	ISO 527-1/-2
Tensile Strength (X and Y Direction)	51	MPa	ISO 527-1/-2
Tensile Strength (Z Direction)	47	MPa	ISO 527-1/-2
Strain at break (X and Y Direction)	9	%	ISO 527-1/-2
Strain at break (Z Direction)	5.5	%	ISO 527-1/-2
Charpy impact strength (+23°C, X Direction)	35	KJ/m	ISO 179/1eU
Charpy notched impact strength (+23°C, X Direction)	5.4	KJ/m	ISO 179/1eA
Flexural Modulus (23°C, X Direction)	2900	MPa	ISO 178
Flexural Strength (X Direction)	73	MPa	ISO 178
Temp. of deflection under load 1.80 MPa, X Direction	96	°C	ISO 75-1/-2
0.45 MPa, X Direction	157	°C	ISO 75-1/-2

The properties of parts manufactured using additive manufacturing technology (e.g. laser sintering, stereolithography, Fused Deposition Modelling, 3D printing) are, due to their layer-by-layer production, to some extent direction dependent. This has to be considered when designing the part and defining the build orientation.

THERMAL PROPERTIES

	VALUE	UNIT	TEST STANDARD
Melting temperature (20°C/min)	176	°C	ISO 11357-1/-3
Temp of deflection under load 1.80 MPa	96	°C	ISO 75-1/-2
Temp of deflection under load 0.45 MPa	157	°C	ISO 75-1/-2
Vicat softening temperature (50°C/h 10N)	179	°C	ISO 306
Vicat softening temperature (50°C/h 50N)	166	°C	ISO 306

The information in this data sheet, as supplied by the material manufacturers, is provided for general guidance only, in good faith and without warranty. The performance characteristics may vary depending on the application, operating conditions or other materials in combination and it is the responsibility of the customer to determine the suitability of the product for its end use.