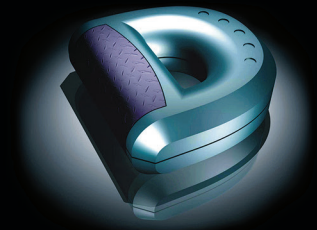


EOS PA 2200 NYLON 12

PA 2200 is a white, powder based, material related to polyamide 12. Strong, durable, heat and chemical resistant it is a versatile material with a range of applications.



Drumlord Limited
Prototyping Technologies

TYPICAL APPLICATIONS INCLUDE FULLY FUNCTIONAL, HIGH QUALITY PLASTIC PARTS. THE RANGE OF MATERIAL PROPERTIES, INCLUDING HIGH TEMPERATURE RESISTANCE, ALLOW PA 2200 TO BE USED AS A SUBSTITUTE FOR INJECTION MOULDED PLASTICS. PARTS CAN BE DYED A RANGE OF COLOURS IF REQUIRED.

The materials' biocompatibility allows its use in a range of medical applications, including prostheses. Excellent abrasion resistance means the material is ideal for assemblies featuring movable parts.

CHARACTERISTICS

COLOUR: White
DENSITY: 930 kg/m³
CHEMICAL RESISTANCE: General Chemical Resistance
ECOLOGICAL VALUATION: FDA approval acc. To USP Biological test (classification VI/121°C)

LASER-SINTERED PARTS MADE FROM PA 2200 POSSESS EXCELLENT MATERIAL PROPERTIES:

- high strength and stiffness
- good chemical resistance
- excellent long-term constant behaviour
- high selectivity and detail resolution
- various finishing possibilities
- bio compatible according to EN ISO 10993-1 and USP/level VI/121 °C
- approved for food contact in compliance with the EU Plastics Directive 2002/72/EC (exception: high alcoholic foodstuff)

MECHANICAL PROPERTIES

	VALUE	UNIT	TEST STANDARD
Izod Impact notched (23°C)	4.4	kJ/m ²	ISO 180/1A
Shore D hardness	75	-	ISO 868
Tensile Modulus (X, Y and Z Directions)	1650	MPa	ISO 527-1/-2
Tensile Strength (X and Y Directions)	48	MPa	ISO 527-1/-2
Tensile Strength (Z Direction)	42	MPa	ISO 527-1/-2
Strain at break (X and Y Directions)	18	%	ISO 527-1/-2
Strain at break (Z Direction)	4	%	ISO 527-1/-2
Charpy impact strength (+23°C, X Direction)	53	KJ/m	ISO 179/1eU
Charpy notched impact strength (+23°C, X Direction)	4.8	KJ/m	ISO 179/1eA
Flexural Modulus (23°C, X Direction)	1500	MPa	ISO 178

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
Vicat softening temperature (50°C/h 50N)	163	°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.

DRUMLORD LTD UNIT 6, DARREN DRIVE PRINCE OF WALES INDUSTRIAL ESTATE ABERCARN, NEWPORT NP11 5AR | T +44 (0)1495 249232 F: +44 (0)1495 249050 E: MAIL@DRUMLORD.CO.UK DRUMLORD.CO.UK