

PrimePart® ST PEBA 2301

TPA

EOS GmbH - Electro Optical Systems

Product Texts
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PrimePart® ST (PEBA 2301) is a natural coloured powder of a polyether block amide, which is developed and optimised for the application in a Laser Sinter system.

Laser-sintered parts made from PrimePart® ST (PEBA 2301) possess excellent material properties:

- High elasticity and strength
- good chemical resistance
- excellent long-term stability
- high selectivity and detail resolution
- various finishing possibilities (e.g vibratory grinding, flame treatment, tub colouring, bond-ing, flocking)

Typical applications of the material are fully functional, flexible plastic parts of highest quality. Due to the excellent mechanical properties the material is often used as a production material for long term use. The rubber-like fatigue behaviour qualifies Prime Part® ST (PEBA 2301) as excellent prototyping and series material.

Mechanical properties	Value	Unit	Test Standard
Shore D hardness (15s)	35	-	ISO 7619-1

3D Data	Value	Unit	Test Standard
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.			
Tensile Modulus			ISO 527-1/-2
X Direction	75	MPa	
Y Direction	75	MPa	
Z Direction	80	MPa	
Tensile Strength			ISO 527-1/-2
X Direction	8	MPa	
Y Direction	8	MPa	
Z Direction	7	MPa	
Strain at break			ISO 527-1/-2
X Direction	200	%	
Y Direction	200	%	
Z Direction	70	%	

Thermal properties	Value	Unit	Test Standard
Melting temperature (20°C/min)	150	°C	ISO 11357-1/-3

Other properties	Value	Unit	Test Standard
Density (lasersintered)	950	kg/m ³	EOS Method
Powder colour (ac. to safety data sheet)	White	-	-
Colour of the components	Natural Colour	-	-

Characteristics
Processing

Laser Sintering, Rapid Prototyping

Delivery form

Powder

Special Characteristics

High impact or impact modified

Features

Colourable, Gas Tightness, Soft Feel

Chemical Resistance

General Chemical Resistance

Applications

Air Ducts, Automotive, Encapsulation, Footwear Components, Handles, Medical, Seals & Gaskets, Sports Equipment