

**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)	<b>35</b>	-	ISO 868

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 (X Direction)	<b>75</b>	MPa	ISO 527-1/-2
Tensile Modulus (Y Direction)	<b>75</b>	MPa	ISO 527-1/-2
Tensile Modulus (Z Direction)	<b>80</b>	MPa	ISO 527-1/-2
Tensile Strength (X Direction)	<b>8</b>	MPa	ISO 527-1/-2
Tensile Strength (Y Direction)	<b>8</b>	MPa	ISO 527-1/-2
Tensile Strength (Z Direction)	<b>7</b>	MPa	ISO 527-1/-2
Strain at break (X Direction)	<b>200</b>	%	ISO 527-1/-2
Strain at break (Y Direction)	<b>200</b>	%	ISO 527-1/-2
Strain at break (Z Direction)	<b>70</b>	%	ISO 527-1/-2

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

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

**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, Handles, Medical, Seals &amp; Gaskets, Sports Equipment