



# Addigy® PPU 83AX1

## Powder Bed Fusion

Additive manufacturing thermoplastic polyurethane grade for powder bed fusion such as Selective Laser Sintering (SLS) and High Speed Sintering (HSS).

High powder flowability, useful for tank feeder systems.

Aromatic ether type; high toughness, impact strength, flexibility, and abrasion resistance; hydrolytic stability.



OTHER DATA PROPERTY	SPECIMEN	VALUE	UNIT	METHOD
<b>Appearance</b>		<b>Natural Color</b>		
Glass Transition Temperature	Powder	-46	°C	ISO 6721-1
Melting Range	Powder	90 - 170	°C	ISO 6721-1
Bulk Density	Powder	Approximately 0.4	g/cm <sup>3</sup>	
Density	Powder Bed	Approximately 0.4	g/cm <sup>3</sup>	
Density	Printed Specimen	Approximately 1.06	g/cm <sup>3</sup>	
Shore Hardness A	Printed Specimen	Approximately 83		DIN ISO 48-4
Tensile Strength xy-Direction	Printed Bar (S2)	13	MPa	DIN 53504 (200 mm/min)
Tensile Strength z-Direction	Printed Bar (S2)	5	MPa	DIN 53504 (200 mm/min)
Elongation at Break xy-Direction	Printed Bar (S2)	500	%	DIN 53504 (200 mm/min)
Elongation at Break z-Direction	Printed Bar (S2)	350	%	DIN 53504 (200 mm/min)
Tear Resistance xy-Direction	Printed Bar	68	kN/m	DIN ISO 34-1
Tear Resistance z-Direction	Printed Bar	42	kN/m	DIN ISO 34-1
Abrasion Resistance xy-Direction	Printed Bar	38	mm <sup>3</sup>	DIN ISO 4649
Rebound Resilience	Printed Specimen	63	%	DIN 53512

Specimen printed in a Farsoon FS251P. Build room temperature: 110 °C, laser energy: 55 - 60 W (double scan), scan speed: 7620 m/s, scan space: 0.15 mm.

\*These values provide general information and are not part of the product specification.



SPECIFICATION PROPERTY	VALUE	UNIT	METHOD
Particle Size X10	30 - 40	µm	Laser Diffraction
Particle Size X50	70 - 90	µm	Laser Diffraction
Particle Size X90	135 - 165	µm	Laser Diffraction
Hausner Ratio	< 1.25		DIN EN ISO 787-11
Water Content	< 1.000	%	DIN EN ISO 15512

### Storage

The product should be stored in its original packaging at all times.

If bags or containers have been opened, they must then be sealed again to ensure proper further storage.

Prolonged exposure of bags or containers containing Addigy® powders to light or light sources containing UV rays should be avoided. UV radiation will lead to degradation especially, but not limited to color changes of the powders.

Constant, normal room temperature with minimal fluctuations and low to normal humidity is essential.

### Storage Time

Stratasys represents that, for a period of 24 months following the day of shipment as stated in the respective transport documents, the product will meet the specifications or values set forth in section "specifications or characteristic data" above, whatever is applicable, provided that the product is stored in full compliance with the storage conditions set forth in and referenced under section "storage" above and is otherwise handled appropriately.

The lapse of the twenty-four months period does not necessarily mean that the product no longer meets specifications or the set values. However, prior to using said product, Stratasys recommends to test such a product if it still meets the specifications or the set values. Stratasys does not make any representation regarding the product after the lapse of the 24 months period and Stratasys shall not be responsible or liable in any way for the product failing to meet specifications or the set values after the lapse of the 24 months period.

### Labeling and statutory requirements

This product data sheet is only valid in conjunction with the latest edition of the corresponding Safety Data Sheet. Any updating of safety-relevant information – in accordance with statutory requirements – will only be reflected in the Safety Data Sheet, copies of which will be revised and distributed. Information relating to the current classification and labeling, applications and processing methods and further data relevant to safety can be found in the currently valid Safety Data Sheet.

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ISO 9001:2015 Certified

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