

Preliminary Technical Data Sheet

Adsint TPU 90 flex

Components

TPU powder for Laser Sintering

Product Description

Adsint TPU 90 flex (thermoplastic Polyurethane) is a powder developed for SLS printing technology. Unique characteristics of printed parts are high elongation, excellent physical properties combined with a rubber-like elasticity and good abrasive as well as chemical resistance. Typical applications are hard-soft systems, sport footwear, orthopedic models, hoses and tubes, sealings and wheels. Adsint TPU 90 flex has been tested on most common SLS printers. Parameters for printing will be provided. Due to its lower printing temperature (below 130° C), energy and time savings are possible. The recycling rate of up to 100 % implies a high cost advantage. Adsint TPU 90 flex is also available in black and can be perfectly used on machines of all sizes.

Delivery form and warehousing

Adsint TPU 90 flex powder should be stored at 15 - 25°C in its originally sealed package in a clean and dry environment.

Product safety

Mandatory and recommended industrial hygiene procedures and the relevant industrial safety precautions must be followed whenever this product is being handled and processed. Product is sensitive to humid environment conditions. For additional information please consult the corresponding material safety data sheets.

For your information

Adsint TPU 90 flex comes in a solid creamy white color. Chemical properties (e.g. resistance against particular substances) and tolerance for solvents can be made available if these factors are relevant for a specific application.

Notice

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

The safety data given in this publication is for information purposes only and does not constitute a legally binding Material Safety Data Sheet (MSDS). The relevant MSDS can be obtained upon request from your supplier or you may contact BASF directly at 3d-printing@basf-3dps.com.

Contact: 3d-printing@basf-3dps.com

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General Properties	Test method	Typical values
Bulk Density / kg/m ³	ISO 1068-1975	500
Printed Part Density / kg/m ³	ISO 61	1050
Mean particle size d50 / μm	ISO 13320	53-63
Melting Temperature / °C	ISO 11357-3 (20 K/min)	154
Crystallization Temperature / °C		
Melt Volume Flow Rate / cm ³ /10min		

Mechanical Properties	Test method	Typical values x-direction	Typical values z-direction
Tensile Strength / MPa	ISO 527-2:93-1B	10	
Tensile Modulus / MPa			
Tensile Elongation at break / %		250	
Flexural Strength / MPa	DIN EN ISO 178		
Flexural Modulus / MPa		10	
Flexural Elongation at break / %			
Charpy Impact Strength (notched) / kJ/m ²	ISO 179-1		
Charpy Impact Strength (unnotched) / kJ/m ²			
Izod Impact Strength (notched) / kJ/m ²	ISO 180		
Izod Impact Strength (unnotched) / kJ/m ²			
Shore Hardness A	ISO 868	88-92	

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