

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. Adsint TPU 90 flex has been tested on most common SLS printers. Parameters for printing can 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	DIN EN ISO 60	540
Printed Part Density / kg/m ³	DIN EN ISO 1183-1	1170
Mean particle size d ₅₀ / μm	ISO 13320	60
Melting Temperature / °C	ISO 11357-3	160
Crystallization Temperature / °C		80
Melt Volume Flow Rate / cm ³ /10min	ISO 1133 (190°C, 2.16kg)	37

Mechanical Properties	Test method	Typical values x-direction	Typical values z-direction
Shore Hardness A	DIN ISO 7619-1	92	92
Tensile Strength / MPa	DIN 53504, S2	13	6
Tensile Elongation at break / %		350	50
Tensile Modulus / MPa	ISO 527	69	58
Flexural Modulus / MPa	ISO 178	58	45
Tear resistance / kN/m	DIN ISO 34-1, B	67	23
Compression set / %	DIN ISO 815-1 B (72h/23°C/30min)	30	29
Rebound resilience / %	DIN 53512	45	43
Abrasion resistance / mm ³	DIN ISO 4649	140	124
Vicat/A (10 N) / °C	ISO 306	96	100

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