

# Ultrasint<sup>®</sup> PA11 rCF

Recycled Carbon Fiber  
Bio-derived | High Rigidity

## TDS

Technical Documentation and Testing  
Summary

# Technical Data Sheet

## Bio-Derived, Recycled Carbon-Fiber Reinforced PA11 Powder for Highest Strength and Lightweight Design

General Properties	Norm	Typical Values
Appearance	-	Black powder
Density (printed part)	DIN EN ISO 1183-1	1.0907
Density (Bulk Density) [g/cm <sup>3</sup> ]	DIN EN ISO 60	435
Mean Particle Size d50 [µm]	ISO 13320	40 - 50
Melting Temperature [°C]	ISO 11357 (10 K/min)	201
Crystallization Temperature [°C]	ISO 11357 (10 K/min)	166
Melting Volume Flow Rate [cm <sup>3</sup> /10min]	ISO 1133 (220°C, 2.16 kg)	11

Tensile Properties	Norm	Typical Values (X)		Typical Values (Z)	
		Dry <sup>1</sup>	Cond <sup>2</sup>	Dry <sup>1</sup>	Cond <sup>2</sup>
E Modulus [MPa]	ISO 527-2	6000	4300	2400	1750
Ultimate Tensile Strength [MPa]	ISO 527-2	84	69	47	42
Elongation at Break [%]	ISO 527-2	7.5	10	4	9

Impact Properties	Norm	Typical Values (X)		Typical Values (Z)	
		Dry <sup>1</sup>	Cond <sup>2</sup>	Dry <sup>1</sup>	Cond <sup>2</sup>
Charpy Impact Strength (notched, 23°C) [kJ/m <sup>2</sup> ]	ISO 179-1	6.7	7.2	3	2.7
Charpy Impact Strength (unnotched, 23°C) [kJ/m <sup>2</sup> ]	ISO 179-1	52	52	34	38

Thermal Properties	Norm	Typical Values
HDT/A (1.8 MPa) [°C]	ISO 75-2	182
HDT/B (0.45 MPa) [°C]	ISO 75-2	191

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 MSDS. The relevant MSDS can be obtained upon request from your supplier or you may contact BASF 3D Printing Solutions GmbH directly at sales@basf-3dps.com.

Electrical Properties	Norm	Typical Values	
		X-Direction	Z-Direction
Volume Resistivity [Ohm-cm]	IEC 62631-3-1	$8.5 \cdot 10^0$	$2.3 \cdot 10^2$
Specific Surface resistivity [Ohm]	IEC 62631-3-2	$6.1 \cdot 10^3$	$2.6 \cdot 10^3$

- 1) Measured after drying 14 days at 80°C / vacuum. Water content is about 0.05% acc. to DIN EN ISO 15512  
2) Measured after conditioning 14 days at 70°C / 62% r.h. Water content is about 0.6% acc. to DIN EN ISO 15512  
All values measured with virgin material.