

Technical Data Sheet

ADSINT® PA12 CF

AdSint® PA12 CF is a composite material based on PA12 and reinforced with carbon fiber. The end parts offer exceptional stiffness combining high tensile and impact strength. This high-tech material is ideal for light weight, conductive and metal replacement applications. Its excellent mechanical properties are influenced by the orientation of the fibers making **AdSint® PA12 CF** suitable for automotive and aerospace applications. **AdSint® PA12 CF** has been tested on most common SLS printers. Parameters for printing will be provided. It is available in anthracite. The refresh rate is between 35% - 50%, depending on the application.

General properties

Measurement	Method & Conditions	Metric Value
Mean Diameter	ISO 13320	38 µm
Maximum particle size		100 µm
Part Density 23°C	ISO 61	1.06± 0,05g/cm ³

Thermal properties

Measurement	Method & Conditions	Metric Value
Melting point T ^m	ISO 11357-3	182 ±2°C
Glass transition Temperature T ^g	ISO 11357-3	40 ±2°C
Heat Deflection Temperature at 1.82 MPa	ISO 75f	155±5°C

Mechanical properties

Measurement	Method & Conditions	Metric Value
Tensile strength (XY)	ISO 527-2:93-1B	58 ± 1 MPa
Tensile modulus (XY)	ISO 527-2:93-1B	3360 ± 100 MPa
Elongation at break (XY)	ISO 527-2:93-1B	11 ± 2 %
Charpy – Impact strength (Unnotched) (XY)	ISO 179 1eU (23°C)	20 ± 8 kJ/m ²
Hardness (Shore D – instantaneous)	ISO 868 (20°C)	76±1

Electrical properties

Measurement	Method & Conditions	Metric Value
Surface resistivity (X)		4 x 10 ³ ohm. square
Surface resistivity (Y)		4 x 10 ³ ohm. square

Chemical resistances

ADSint® PA 12 CF features outstanding resistance to oils, hydraulic fluids and fuels, as well as excellent resistance to acids, bases and salts.

Handling – storage

Store the product in original packaging away from moisture and heat. Under these conditions, the material will maintain its technical properties for 3 years. Once the material passes the 3 year limit, it will be necessary to perform testing of the specified data to restart the shelf life period.

For processing the black material, please use gloves. The particle shape of the additives can irritate the skin.

Delivery Form

The material will be delivered in 2kg bottles or 20kg drums (2x10kg powder bags).

The information presented in this document is provided in goodwill and represents the best of ADVANC3D Materials' knowledge about the product. It is purely informative. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the goods described or the information provided herein.