

# Technical Data Sheet

## ADSINT® PA12 ESD

AdSint® PA12 ESD (ElectroStatic Discharge) is a PA12 powder containing carbon fibre with low manipulation restrictions. It has good dissipative properties ( $10^5$  Ohms/square) keeping the same mechanical properties and smooth surface like AdSint® PA12. The endproduct is anthracite. AdSint® PA12 ESD has been tested and approved on most common SLS printers. The refreshrate is between 30% and 40%, depending on the application.

### General properties

Measurement	Method & Conditions	Metric Value
Mean Diameter	ISO 13320	49 $\mu$ m
Particle Size Distribution		
Fine Particles < 22 $\mu$ m	ISO 13320	10 max. %
Coarse Particles > 60 $\mu$ m		15 max. %
Powder packed density 23°C	ISO 1068-1975	0,5 $\pm$ 0,05g/cm <sup>3</sup>
Part Density 23°C	ISO 61	1.00 $\pm$ 0,05g/cm <sup>3</sup>
Part Water absorption at 23°C, 50% RH at equilibrium	ISO 62/1	0.3 to 0.5%

### Thermal properties

Measurement	Method & Conditions	Metric Value
Melting point T <sup>m</sup>	ISO 11357-3	181 $\pm$ 2°C
Glass transition Temperature T <sup>g</sup>	ISO 11357-3	* $\pm$ 2°C
Heat Deflection Temperature at 0.45 MPa	ISO 75f	* $\pm$ 5°C
Heat Deflection Temperature at 1.82 MPa	ISO 75f	117 $\pm$ 2°C

### Mechanical properties

Measurement	Method & Conditions	Metric Value
Tensile strength	ISO 527-2:93-1B	54 $\pm$ 1 MPa
Tensile modulus	ISO 527-2:93-1B	2900 $\pm$ 200 MPa
Elongation at break	ISO 527-2:93-1B	4,5 $\pm$ 0,5 %
Flexural modulus	ISO 178 (23°C)	**** $\pm$ ** MPa
Charpy – Impact strength (Unnotched)	ISO 179 1eU (23°C)	** $\pm$ * kJ/m <sup>2</sup>
Hardness (Shore D – instantaneous)	ISO 868 (20°C)	** $\pm$ *

## Electrical properties

Measurement	Method & Conditions	Metric Value
Surface resistivity		10 <sup>5</sup> ohm. square

## Chemical resistances

ADSint® PA 12 EST 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 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).

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