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GRAPHMATEC

# **AROS SLS PA11 ESD**

# PA11-graphene powder for SLS

AROS SLS PA11 ESD is a Polyamide 11 (PA11) powder enhanced by our Aros Graphene® Technology, with electrostatic discharge (ESD) properties.

This unique graphene-engineered powder gives homogeneous properties in all print directions, makes the parts denser than neat PA11, and decreases dusting, amongst other improvements.

## **IMPROVED PROCESSABILITY:**

2 x less post-processing time Increased flowability Powder is anti-static Decreased dusting Easy to print

The world's first graphene engineered SLS powder.

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# **AROS SLS PA11 ESD**

## **PROPERTY ENHANCEMENT**

Carbon fiber alternative Isotropic conductivity Enables denser parts

## **INDUSTRIAL APPLICATIONS**

Dedicated electrical connections ESD shielding of electronics Line sensors



Diagram displaying orientation of the parts used for electrical and mechanical data evaluation

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Surface (LEFT) and Volume (RIGHT) resistivity of printed parts.

### ELECTRICAL PROPERTIES-TYPICAL VALUES

Properties	Test method	Unit	YZ Plane	XY Plane
Surface resistivity	ASTM D4496	Ω/Sq	$1.4 \pm 0.2 \cdot 10^5$	$1.6 \pm 10^5$
Volume resistivity	ASTM D4496	Ω·cm	1.7±0.6 ·10 <sup>4</sup>	$3.3 \pm 10^4$

### POWDER PROPERTIES-TYPICAL VALUES

Properties	Test method	Unit	Value
BulkDensity	Internal Method	kg/L	0.473 ± 5
Tap Density	Internal Method	kg/L	0.593 ± 7

## PART PROPERTIES-TYPICAL VALUES

Properties	Test method	Unit	X-Direction	Z-Direction
Tensile modulus, 23°C	ISO 527-2/1B	MPa	1570	1680
Tensile modulus, 80°C	ISO 527-2/1B	MPa	570	650
Tensile strength 23°C	ISO 527-2/1B	MPa	44	35
Tensile strength, 80°C	ISO 527-2/1B	MPa	35	24
Strain at break, 23°C	ISO 527-2/1B	%	15	2.6
Strain at break, 80°C	ISO 527-2/1B	%	14	6.8
Properties	Test method	Unit	Average	
Density	Internal Method	kg/m <sup>3</sup>	1022 ± 10	

### Disclaimer:

Data sheet values are for quality control only. Actual values may vary due to processing, and end-use performance depends on factors such as materials, design, and environment. Users are responsible for determining safety, suitability, and disposal practices. Graphmatech materials are not intended for medical, pharmaceutical, or food applications, and no warranty is given for fitness or liability for any damage.