

Technical Data Sheet

ADSINT® PA12LW

AdSint® PA12LW (Low Weight) is a PA12 based powder offering a lighter end product. It has a balanced density reduction and slightly lower mechanical properties than PA12. The usage offers high cost savings because the yield rate per kilo is 15% higher. Typical applications are aeronautical and automotive parts where weight is crucial. **AdSint® PA12LW** has been tested on most common SLS printers. Parameters for printing will be provided. The refresh rate is between 25% and 35%, depending on the application.

General properties

Measurement	Method & Conditions	Metric Value
Mean Diameter	ISO 13320	40 µm
Particle Size Distribution		
Fine Particles < 28 µm	ISO 13320	10 max. %
Coarse Particles > 51 µm		10 max. %
Powder packed density 23°C	ISO 1068-1975	0,48 ± 0,05g/cm ³
Part Density 23°C	ISO 61	0.85± 0,05g/cm ³
Part Water absorption at 23°C, 50% RH at equilibrium	ISO 62/1	0.5 to 0.7%

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	41±2°C
Heat Deflection Temperature at 0.45 MPa	ISO 75f	160°C
Heat Deflection Temperature at 1.82 MPa	ISO 75f	75±5°C

Mechanical properties

Measurement	Method & Conditions	Metric Value
Tensile strength	ISO 527-2:93-1B	29 ± 1 MPa
Tensile modulus	ISO 527-2:93-1B	1500 ± 50 MPa
Elongation at break	ISO 527-2:93-1B	17 ± 2 %
Flexural modulus	ISO 178 (23°C)	1330 ± 50 MPa
Charpy – Impact strength (Unnotched)	ISO 179 1eU (23°C)	45± 5 kJ/m ²
Hardness (Shore D – instantaneous)	ISO 868 (20°C)	72±1

Chemical resistances

ADSint® PA 12LW 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.

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.