



TECHNICAL DATA SHEET

DURAPRO PA12



1. DESCRIPTION

DuraPro PA12 is a highly functional polyamide (nylon) that is ideal for industrial applications. It is characterised by exceptionally high impact and notched impact strength as well as very good heat resistance. With its excellent chemical resistance, low moisture absorption and easy handling, it is the ideal choice for demanding 3D printing projects.

2. FEATURES

- Excellent mechanical properties
- High thermal resistance (VICAT A 142°C)
- Low moisture absorption
- Good chemical resistance

3. PROPERTIES

TEST	METHOD	UNIT	VALUE
Density	ISO 1183	g/cm ³	1.01
Melt Volume Rate (MVR) 235°C/5.0 kg	ISO 1133	cm ³ /10min	8.0
Water Absorption (Saturation 23°C)	ISO 62	%	1.6
Tensile Modulus	ISO 527-1	MPa	1440
Tensile Strength (Indentation Depth)	ISO 527-2	MPa	43.0
Tensile Elongation (Indentation Depth)	ISO 527-2	%	5.0
Nominal Elongation at Break	ISO 527-2	%	>50
Charpy Notched Impact Strength (+23°C)	ISO 179/1eA	kJ/m ²	11
Charpy Notched Impact Strength (-30°C)	ISO 179/1eA	kJ/m ²	6.0
Charpy Unnotched Impact Strength (+23°C)	ISO 179/1eU		No Break (NB)
Charpy Unnotched Impact Strength (-30°C)	ISO 179/1eU		No Break (NB)
Puncture Maximum Force (-30°C)	ISO 6603-2	J	60.0
Multiaxial Instrumented Impact Test, Peak Force -30°C	ISO 6603-2	N	4800
Heat Deflection Temperature (DTUL) 0.45 MPa, unannealed	ISO 75-2/B	°C	135
Heat Deflection Temperature (DTUL) 1.8 MPa, unannealed	ISO 75-2/A	°C	55.0
Vicat Softening Temperature	ISO 306/B50	°C	142
Mass Temperature	ISO 11357-3	°C	180
CLTE Flow	ISO 11359-2	cm/cm/°C	1.0E-4
Specific Surface Resistance	IEC 60093	ohms	1.0E+14
Specific Volume Resistivity	IEC 60093	ohms cm	1.0E+14
Dielectric Strength	IEC 60243-1	kV/mm	30
Comparative Tracking Index (CTI)	IEC 60112	V	600

*Temperature resistance tested at a minimum wall thickness of 4 mm.



PRINT SETTINGS

Nozzle	260-290 °C
Heatbed	110 °C
Adhesive	recommended
Speed	max. 150 mm/s
Cooling	0-50%
Enclosed Space	yes
Hardened Nozzle	no
Max. Volumetric Speed	8 mm ³ /s

Recommended settings for printers with a 0.4mm Nozzle. Max. 50% layerheight.
Optimal print settings may vary between different printers and also depend on environmental factors.

4. CERTIFICATIONS & ADDITIONAL INFORMATION



Certifications depend on colors in final product. More info in the additional information sheet.

5. STORAGE AND SHELF LIFE

Store in a dry room at room temperature (18-27°C / 65-80°F). Keep out of direct heat and sunlight.
When stored correctly, this material has a shelf life of 2 years.
Additional info in our regulatory, additional information and chemical resistance data sheets.