

## Fiche Technique

**KIMYA PA6-CO 3D FILAMENT**

Nylon 6 copolymer additive manufacturing filament

**DESCRIPTION**

Kimya PA6-CO is a 3D printing filament made from a Nylon 6-based copolymer. This unfilled polyamide stands out for its excellent tensile strength, low warping, and ease of use—even on open-chamber printers. Unlike many other nylon filaments, PA6-CO combines strong mechanical, chemical, and heat resistance with user-friendly printability, making it an ideal standard polyamide for functional parts and industrial applications. As with all polyamides, the filament should be dried before printing to ensure optimal results.

**BENEFITS**

- Strong and Reliable.
- Low Warping Behavior.
- Chemical and Heat Resistant.

**TECHNICAL DATA****Properties**

Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm
Density	1.157 g/cm <sup>3</sup> (0.042 lb/in <sup>3</sup> )
Glass transition temperature (T <sub>g</sub> )	65°C (149°F)
Melting Temperature (T <sub>m</sub> )	227°C (440°F)

**Values**

1.75 ± 0.1 mm 2.85 ± 0.1 mm
1.157 g/cm <sup>3</sup> (0.042 lb/in <sup>3</sup> )
65°C (149°F)
227°C (440°F)

**Test Methods**

INS-6712
ISO 1183-1
ISO 11357-1 DSC (10°C/min-20-300°C)
ISO 11357-1 DSC (10°C/min-0-300°C)

**Properties**

Tensile Modulus	2,166 MPa (314.2 ksi)
Tensile Strength	56.1 MPa (8.14 ksi)
Tensile Strain at Strength	4.3 %
Tensile Stress at Break	13.4 MPa (1.94 ksi)
Tensile Strain at Break (type A)	< 14 %
Flexural Modulus	2,017 MPa (292.5 ksi)
Deformation at Flexural Strain	< 5 %
Flexural Stress at Conventional Deflection (3.5% Strain)*	65.9 MPa (9.56 ksi)
Charpy Impact Resistance	3.9 kJ/m <sup>2</sup> (1.85 ft-lbs/in <sup>2</sup> )
Shore Hardness	77.3 D

**Values**

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56.1 MPa (8.14 ksi)
4.3 %
13.4 MPa (1.94 ksi)
< 14 %
2,017 MPa (292.5 ksi)
< 5 %
65.9 MPa (9.56 ksi)
3.9 kJ/m <sup>2</sup> (1.85 ft-lbs/in <sup>2</sup> )
77.3 D

**Test Methods**

ISO 527-2/1A/50
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ISO 178
ISO 178
ISO 178
ISO 179-1/1eA
ISO 868

**PROCESSING****Printing Direction**

Printing Speed	50-60 mm/s
Nozzle Temperature	265°C - 275°C (509°F - 527°F)
Bed Temperature	70°C - 80°C (158°F - 176°F)

**XY**

50-60 mm/s
265°C - 275°C (509°F - 527°F)
70°C - 80°C (158°F - 176°F)

**SUSTAINABILITY**Can be  
recycledRecyclable  
packaging**NOTES**

- \*According to ISO 178, end of the test at 5% deformation even if there is no specimen break.
- The data should be considered as indicative values - Properties can be influenced by production conditions.

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