AIRTECH EUROPE SARL
18, ZI Haneboesch
L-4562 Differdange
LUXEMBOURG
Phone: +352 58 22 82 1
Fax: + 352 58 49 35
E-mail: sales@airtech.lu
Website: www.airtech.lu

Fiche Technique

KIMYA PC-S 3D FILAMENT

Strong and highly versatile filament for FFF 3D Printers

DESCRIPTION

Kimya PC-S is a 3D printing filament made from polycarbonate (PC), an amorphous thermoplastic known for its strength and heat resistance. Naturally transparent and highly durable, PC-S is designed for demanding applications that require both toughness and thermal stability. Its mechanical properties make it ideal for use in sectors such as automotive, engineering, and aerospace, as well as for producing impact-resistant consumer goods like helmets, housings, toys, and electronics.

BENEFITS

- Sterilizable.
- High Heat Resistance.
- Exceptional Toughness.

TECHNICAL DATA

Properties	Values	Test Methods
Diameter	1.75 ± 0.1 mm 2.85 ± 0.1 mm	INS-6712
Density	1.184 g/cm^3 (0.0428 lb/in^3)	ISO 1183-1
Moisture Rate	< 1 %	ISO-6711
Melt flow index (MFI)	21 - 27 g/10 min	ISO 1133-1(@260°C-5kg)
Glass transition temperature (Tg)	145°C (293°F)	ISO 11357-1 DSC (10°C/min-20-300°C)
Properties	**Values**	**Test Methods**
Maximum use Temperature	140°C (284°F)	-
Tensile Modulus	2,116 MPa (306.9 ksi)	ISO 527-2/5A/50
Tensile Strength	59.9 MPa (8.69 ksi)	ISO 527-2/1A/50
Tensile Strain at Strength	5.6 %	ISO 527-2/1A/50
Tensile Stress at Break	59.8 MPa (8.67 ksi)	ISO 527-2/1A/50
Tensile Strain at Break (type A)	5.5 %	ISO 527-2/1A/50
Flexural Modulus	1,630 MPa (236.4 ksi)	ISO 178
Deformation at Flexural Strain	> 5 %	ISO 178
Flexural Stress at Conventional Deflection (3.5% Strain)*	56.7 MPa (8.22 ksi)	ISO 178
Charpy Impact Resistance	5.2 kJ/m^2 (2.4 ft-lbs/in^2)	ISO 179-1/1eA
Shore Hardness	77.1 D	ISO 868

PROCESSING

Printing Direction	XY
Printing Speed	45 - 55 mm/s
Nozzle Temperature	270°C - 280°C (510°F - 536°F)
Bed Temperature	135°C - 145°C (275°F - 293°F)
Chamber Temperature	135°C - 145°C (275°F - 293°F)

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.

Dernière mise à jour : 2025-12-22
Nom du chapitre : KIMYA Filaments for Additive Manufacture

As the conditions or methods of use, including storage, are beyond our control, Airtech Europe does not assume any responsibility for the performance of this material for any particular use. The material is sold "as is". Airtech Europe disclaims, and buyer waives, any and all implied warranties, including without limitation the implied warranties of merchantability and of fitness for particular use. The information contained herein represents typical properties and should not be used for specification purposes. This translation is provided for your convenience only. The official language is English and the official law is Luxembourg.