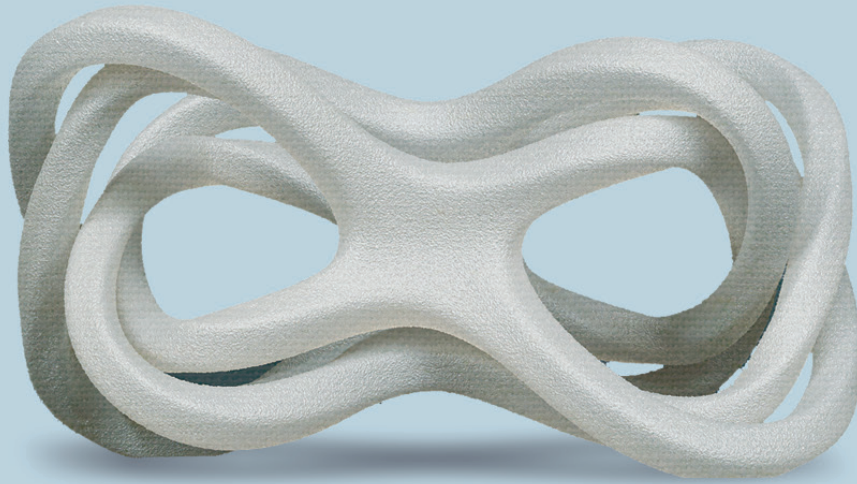




KIMYA PEKK CARBON



PEKK CARBON FILAMENT is easier to print than PEI or PEEK. It is designed for high technical applications.

| HEAT RESISTANCE (150°) | ABRASION RESISTANCE
| CHEMICAL RESISTANCE | FLAME RETARDANT UL94 V0

FILAMENT PROPERTIES

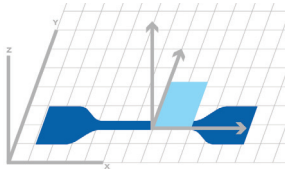
| DESCRIPTION | TEST METHODS | UNITS | VALUES |
|---------------------------------|--------------|-------------------|--------------------------|
| Diameter | INS-6712 | mm | 1.75 ± 0.1 2.85 ± 0.1 |
| Density | ISO 1183-1 | g/cm ³ | 1.27 |
| Moisture rate | INS-6711 | % | < 1 |
| Glass transition temperature Tg | ISO 11357-1 | °C | 160 |

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

| | |
|-----------------------|--------------------|
| PRINTING DIRECTION | XY |
| PRINTING SPEED | 20-40 mm/s |
| INFILL | 100% - rectilinear |
| INFILL ANGLE | 45°/-45° |
| EXTRUSION TEMPERATURE | 370-380°C |
| BED TEMPERATURE | 150°C |
| CHAMBER TEMPERATURE | 80°C |

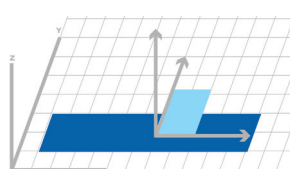
RESULTS

TENSILE TEST



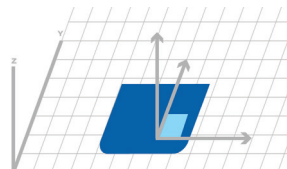
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

PRINTED SPECIMENS PROPERTIES

| | PROPERTIES | TEST METHODS | UNITS | VALUES |
|-----------------------|----------------------------|-----------------|---------------------|------------------|
| THERMAL | Max T ° of use | - | °C | 150 |
| ELECTRICAL PROPERTIES | Dielectric constant | IEC 60243-1 | KV/mm | 84 |
| | Surface resistivity | ASTM D257 | Ohms/m ² | 10 ¹⁶ |
| TENSILE | Tensile modulus | ISO 527-2/5A/50 | MPa | 2,900 |
| | Tensile strength | ISO 527-2/5A/50 | MPa | 39,1 |
| | Tensile strain at strength | ISO 527-2/5A/50 | % | 3,2 |
| BENDING TEST | Flexural modulus | ISO 178 | MPa | 2,924 |
| | Flexural strength | ISO 178 | MPa | 85,9 |

CHEMICAL RESISTANCE

| | |
|-----------------|--|
| EXCELLENT | Unattacked material and few or no absorptio acids, alcohols , alkyds , ketones , bases, esters, ethers , halogens , hydrocarbons |
| NOT RECOMMENDED | Nitric acid , sulfuric acid , methylene chloride |