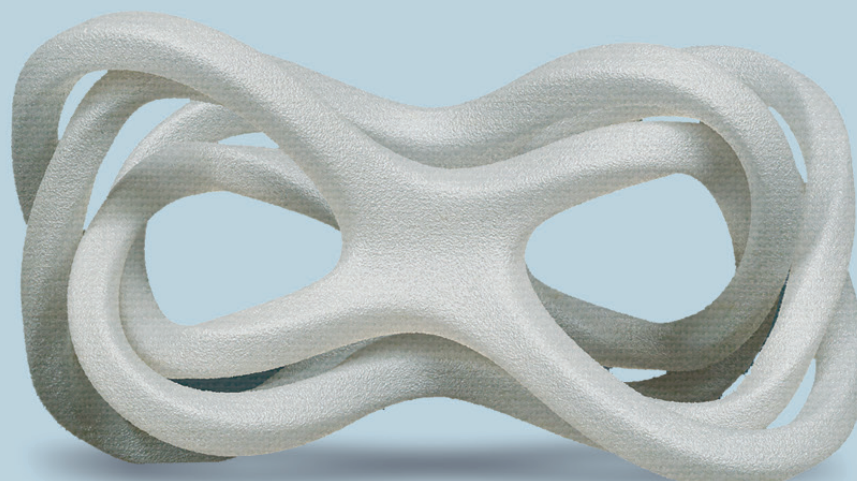




## KIMYA PEKK-SC



THANKS TO ITS SEMI CRYSTALLINE STRUCTURE, **PEKK-SC** COMBINES EXCELLENT MECHANICAL PROPERTIES AND VERY GOOD THERMAL, FIRE AND CHEMICAL RESISTANCES.

**| SEMI CRYSTALLINE STRUCTURE | EXCELLENT MECHANICAL PROPERTIES**

**| THERMAL RESISTANCE (UP TO 260°C) | FIRE RESISTANCE**

### FILAMENT PROPERTIES @23°C

DESCRIPTION	TEST METHODS	UNITS	VALUES
Diameter	INS-6712	mm	1,75 +/- 0,1 2,85 ± 0,1
Density	ISO 1183-1	g/cm <sup>3</sup>	1,27
Moisture rate	INS-6711	%	< 1
Melt Flow Index (MFI)	ISO 1133-1 (380°C - 5 kg)	g/10min	35
Glass transition temperature T <sub>g</sub>	ISO 11357-1 (10°C/min - 20-420°C)	°C	161
Melting temperature T <sub>m</sub>	ISO 11357-1 (10°C/min - 20-420°C)	°C	332
Heat deflection temperature HDT (1,8 Mpa)	ISO 75f	°C	172

### ELECTRICAL PROPERTIES

Dielectrical strength	IEC 60253-1 (100 M)	kV/mm	84
Relative permittivity	IEC 60250 (1 MHZ)	-	2,6
Loss tangent (tan)	IEC 60250 (1 KHZ)	-	0,007
Volume Resistivity	ASTM D257	Ohms/cm	10 <sup>16</sup>
Surface Resistivity	ASTM D257	ohms/m <sup>2</sup>	10 <sup>16</sup>

## FILAMENT PROPERTIES @23°C

### CHEMICAL RESISTANCE

Excellent

Unattacked material and little or no absorption acids, alcohols, alkyds, ketones, bases, esters, ethers, halogens, hydrocarbons

Not recommended

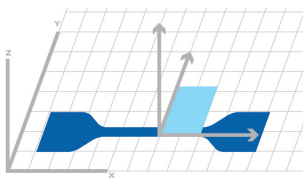
Nitric acid, sulfuric acid, methylene chloride

## PRINTED SPECIMENS PROPERTIES

PRINTING DIRECTION	Upright (ZX)	On edge (XZ)
PRINTING SPEED	45 mm/s	45 mm/s
INFILL	100%	100%
INFILL ANGLE	45°C/-45°C	-
NOZZLE TEMPERATURE	260°C	260°C
BED TEMPERATURE	95°C	95°C

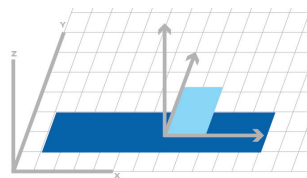
## RESULTS

### TENSILE TEST



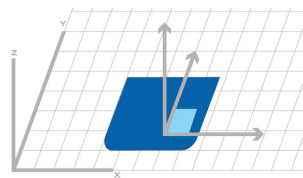
Dim.(mm) : 75x12,5x2

### BENDING TEST - CHARPY IMPACT

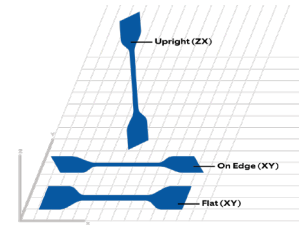


Dim. (mm) : 80x10x4

### HARDNESS



Dim.(mm) : 45x45x4



## PRINTED SPECIMENS PROPERTIES @23°C - UNANNEALED PARTS

	PROPERTIES	TEST METHODS	UNITS	VALUES UPRIGHT (ZX)	VALUES ON EDGE (XZ)
<b>TENSILE TEST</b>	Tensile Modulus	ISO 527-2/1A/50	MPa	2784	2448
	Strength	ISO 527-2/1A/50	MPa	32,4	64,1
	Strain at Strength	ISO 527-2/1A/50	%	1,4	4,5
	Stress @ break	ISO 527-2/1A/50	MPa	32,4	64,1
	Strain @ break	ISO 527-2/1A/50	%	1,4	4,5
<b>BENDING TEST</b>	Flexural modulus	ISO 178	MPa	1705	1918
	Flexural stress @conventionnal deflection (3,5% strain)**	ISO 178	MPa	61,6	79,3
	Flexural strength	ISO 178	MPa	62,9	-
	Flexural strain @ flexural strength	ISO 178	%	3,8	-
	Flexural stress @break	ISO 178	MPa	62,9	-
	Flexural strain @ break	ISO 178	%	3,8	-
	Charpy impact resistance	ISO 179-1/1EA	kJ/m2	1,9	5,35

\*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.

## CERTIFICATION

FIRE/SMOKE STANDARDS

COMPLIANT WITH: UL94 V0 @0,8MM - EN45545 HL3 : R22 R23 - FAR 25,853