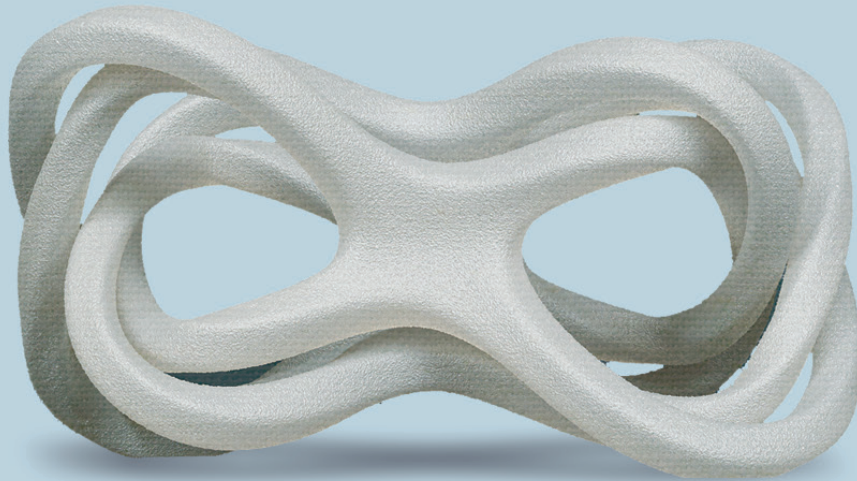




KIMYA ABS-S



ABS-S FILAMENT is a Standard ABS with high impact resistance.

| IMPACT RESISTANCE

| BETTER TEMPERATURE RESISTANCE THAN PLA (AROUND 90°C)

FILAMENT PROPERTIES

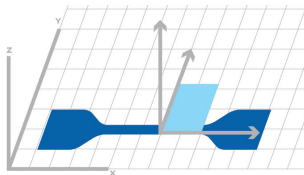
| DESCRIPTION | TEST METHODS | UNITS | VALUES |
|--|--|-------------------|--------------------------|
| Diameter | INS-6712 | mm | 1.75 ± 0.1 2.85 ± 0.1 |
| Density | ISO 1183-1 | g/cm ³ | 1.035 |
| Moisture rate | INS-6711 | % | < 1 |
| Melt Flow Index (MFI) (@220°C – 10 kg) | ISO 1133-1 | g/10min | 3.5 – 6.0 |
| Glass transition temperature (Tg) | ISO 11357-1 DSC (10°C/min – 20 to 300°C) | °C | 107 |

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

| | |
|-----------------------|--------------------|
| PRINTING DIRECTION | XY |
| PRINTING SPEED | 25 - 50 mm/s |
| INFILL | 100% - rectilinear |
| INFILL ANGLE | 45°/-45° |
| EXTRUSION TEMPERATURE | 260°C |
| BED TEMPERATURE | 85 - 95°C |

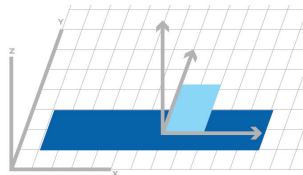
RESULTS

TENSILE TEST



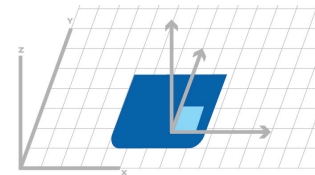
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

PRINTED SPECIMENS PROPERTIES

| | PROPERTIES | TEST METHODS | UNITS | VALUES |
|-----------------------|--|-----------------|-------------------|--------|
| MECHANICAL PROPERTIES | Tensile modulus | ISO 527-2/5A/50 | MPa | 1,484 |
| | Tensile strength | ISO 527-2/5A/50 | MPa | 35,3 |
| | Tensile strain at strength | ISO 527-2/5A/50 | % | 2,7 |
| | Tensile Stress at Break | ISO 527-2/5A/50 | MPa | 22,8 |
| | Tensile strain at break | ISO 527-2/5A/50 | % | 9,8 |
| | Flexural modulus | ISO 178 | MPa | 1,443 |
| | Flexural stress at conventional deflection (3,5% strain)** | ISO 178 | MPa | 43,6 |
| | Flexural strength | ISO 178 | MPa | >5* |
| | Charpy impact resistance | ISO 179-1/1eA | kJ/m ² | 24,7 |
| | Shore Hardness | ISO 868 | Shore D | 70 |

*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.