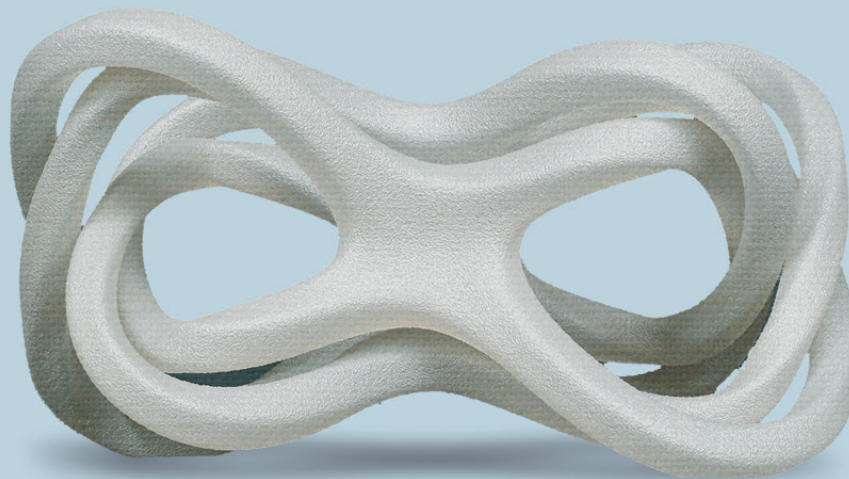




PETG-S



PETG-S confers to the filament the perfect balance between flexibility and mechanical strength

| FLEXIBLE & STRONG | INTERLAYER ADHESION

| LOW WATER ABSORPTION | FOOD CONTACT COMPLIANT

FILAMENT PROPERTIES

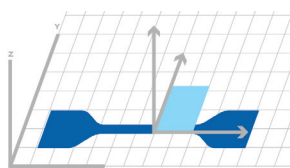
| DESCRIPTION | TEST METHODS | UNITS | VALUES |
|------------------------|---------------------------------------|-------------------|--------------------------|
| Diameter | INS-6712 | mm | 1.75 ± 0.1 2.85 ± 0.1 |
| Density | ISO 1183 | g/cm ³ | 1.274 |
| Moisture rate | INS-6711 | % | < 0,7 |
| MFI (@225°C – 2.16 kg) | ISO 1133 | g/10min | 12.1 |
| Glass temperature tg | ISO 11357 DSC (10°C/min – 20 à 280°C) | °C | 80 |
| Melting temperature tf | ISO 11357 DSC (10°C/min – 20 à 280°C) | °C | n/a |

PRINT PARAMETERS AND SPECIMENS DIMENSIONS

| | |
|------------------------------|--------------------|
| PRINT AXIS | XY |
| PRINT SPEED | 50 mm/s |
| INFILL | 100% - rectilinear |
| INFILL ANGLE | 45°/-45° |
| EXTRUSION TEMPERATURE | 225°C |
| PLATFORM TEMPERATURE | 60°C |

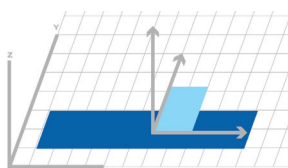
RESULTS

TENSILE TEST



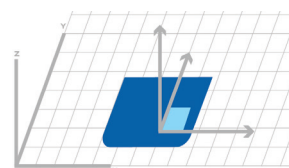
Dim.(mm): 75x12.5x2
Specimen type: ISO 527-5A

BENDING TEST - CHARPY IMPACT



Dim. (mm): 80x10x4

HARDNESS



Dim.(mm): 45x45x4

PRINTED SPECIMENS PROPERTIES

| | PROPERTIES | TEST METHODS | UNITS | VALUES |
|----------------------|---|--------------|---------|--------|
| TENSILE TEST | Tensile modulus | ISO 527 | MPa | 1,833 |
| | Tensile strength | ISO 527 | MPa | 46.6 |
| | Elongation @tensile strength | ISO 527 | % | 3.3 |
| | Tensile stress @break | ISO 527 | MPa | 11.1 |
| | Tensile elongation @break | ISO 527 | % | 24.3 |
| BENDING TEST | Flexural modulus | ISO 178 | MPa | 1,641 |
| | Flexural stress @3.5% | ISO 178 | MPa | 57.5 |
| | Deformation @flexural strength | ISO 178 | % | >5* |
| CHARPY IMPACT | Charpy impact strength (notched type A) | ISO 179 | kJ/m2 | 4.0 |
| HARDNESS | Hardness | ISO 868 | Shore D | 72.5 |

*According to ISO 178, end of the test at 5% deformation even if there is no specimen break

CERTIFICATION

FOOD CONTACT APPROVAL

EU 10/2011 (for all colours) & **FDA 21 CFR** (for natural only)

The results presented are the averaged values of the PETG-S 1.75mm range. For each test, 5 specimens per reference, previously placed at least 24 hours in climatic chamber (23°C - hygrométrie : 50%) have been tested.