MATERIALS FOR 3D PRINTING

BLUEDP

DANISH TECHNOLOGICAL INSTITUTE

BlueDP

Blue X-Ray and metal detectable nylon

BlueDP is a type of plastic designed to replace parts that would otherwise be CNC milled or injection molded. The material was developed by the Danish Technological Institute. 3S surface-treated BlueDP is approved as food contact material (FCM) and can be detected by metal detectors and X-ray scanners in a production line, as it contains metal.

We print with Selective Laser Sintering (SLS). The technology prints in powder and uses a laser to sinter the powder layers together. 3D printing with SLS offers a great deal of design freedom, as the parts do not need support material.

The technology can produce parts that comply with ISO 2768-m 1; however, the tolerances depend significantly on the geometry of the part. At the Danish Technological Institute, our 3D printing production is also ISO 9001 certified.

Technology:
- Select Laser Sintering

Printer:
- EOS - P396

Build volume:
- 340 x 340 x 600 mm

Application:
- Industrial use

Possible post-processing:
- Deburring
- Media blasting
- Colouring
- Lacquering
- 3S surface sealing

Customization:
Contact us if you have specific requests for surface roughness and material properties.

MATERIAL PROPERTIES	
TENSILE STRENGTH [Rm]	48 MPa
YIELD STRENGTH [Rp0,2]	43 MPa
ELONGATION AT BREAK [A]	15 %
VICKERS HARDNESS [Shore D]	80
PART DENSITY	>96,0 %
MATERIAL MASS DENSITY	0,95 g/cm^3

SURFACE TEXTURE	Raw	3S surface sealing
Average roughness [Ra]	10 ±3	1,2

Design features:
- Minimum feature size 0,8 mm
- Minimum channel size Ø1,5 mm
- Minimum wall thickness 0,7 mm
- Support not necessary
- Hole for emptying powder Ø5 mm

Examples of use
- Hygienic nozzles and manifolds for food applications
- Lightweight grippers for robotic handling
- Machine components

Danish Technological Institute - Industrial 3D-printing
Email: 3dprint@dti.dk
Phone: 7220 1701
www.dti.dk/3dprinting

Visit our website to see our AM services

DANISH TECHNOLOGICAL INSTITUTE