

Material data sheet for voxeljet 3D printers

1. PLASTIC

Base material	PMMA Partikelmaterial (55 µm)	PMMA Partikelmaterial (85 µm)
Binder-type	Polypor B	Polypor C
Tensile strength	4,3 MPa	3,7 MPa
Yield point	1 %	1 %
Burn-out temperature	700 °C	600 °C
Residual ash content	< 0,3 %	< 0,02 %
Especially suited for	Investment casting; design models	Investment casting
Advantages	sharp edges; for highest accuracy and true-to-detail	dyeable; burns out very well

TECHNICAL DATA PLASTIC PARTS

Layer thickness	80-200 µm; Standard 150 µm
Resolution x, y	up to 600 dpi
Accuracy	0,3 % (min. +/- 100 µm)

SUITABLE FINISHING TREATMENT

	Wax	Epoxy
Tensile strength	see Base material	up to 25 MPa
Softening temperature	73 °C	80 °C
Burn-out temperature	see Base material	-
Characteristics	smooth surface, liquid	solid material, dyeable

FEATURES PLASTIC

- Can be used for prototypes, functional models or lost models
- Fast delivery within a few working days
- Precise layering & high accuracy
- Components of high complexity
- Economical production in batch sizes of 1 as well as in series production
- Infiltration in any colour
- Perfect for investment casting because of the base material PMMA

2. SAND

Base material	Silica Sand
Binder-type	Inorganic binder
Bending strength	220-320 N/cm ²
Loss on ignition	<1 %
Especially suited for	Coreprinting for sandcasting
Advantages	Low emissions during casting; Environmentally friendly; No typical odour

TECHNICAL DATA SAND PARTS

Layer thickness	200-400 µm; Standard 300 µm
Resolution x, y	up to 200 dpi
Accuracy	0,2 % (min. +/- layer thickness)

FEATURES SAND

- 100 % inorganic binder
- Good bending strength
- Castable with all current alloys
- Pretty low emissions while casting
- Emissions are mainly water
- Low running costs
- Process operates at room temperature
- The sand mixture comes ready to use

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