TIGITAL® 3D-Set
Product Specifications

PPP (Premium Performance Polymer) 371/80004

PPP (Premium Performance Polymer) 371/80002

TPP 371/80001

TPP High Flex 371/80006

www.tigital-3dset.com

PRODUCT DATA SHEET

TIGITAL® 3D-Set	PPP 371/ 80004
Appearance	Powder
Colour	black
Application	TBD
Particle Size Distribution	d(0,1): 15µm; d(0,5): 44µm; d(0,9): 80µm (Laser Diffraction)
Post-Curing Parameters*	30 min 75°C + 30 min 85°C + 60 min 115°C + 60 min 185°C
Processing*	Selective Laser Sintering (SLS) at temperatures between 60°C - 80°C
Storage conditions	15-25°C in its originally sealed package in a clean and dry environment for six (6) months upon the date of delivery.

* These post curing and processing parameters are intended to give a guidance only and have to be individually checked and/or adjusted for each respective printed part geometry, used printing conditions and post curing setup by the buyer/user.

Mechanical Properties

Property	Value	Test method
Tensile Modulus	2200 MPa	According to ISO 527
Tensile Strength	32 MPa	According to ISO 527
Elongation at Break	2.4 %	According to ISO 527
Shore D- hardness	73,2D	According to ISO 868
Charpy- Impact Strength	8,57 kJ/m^2	According to Iso 179
Charpy- Notched Impact Strength	1,4 kJ/m^2	According to ISO 179
Izod- Impact Strength	7,85 kJ/m^2	According to ISO 180
Izod- Notched Impact Strength	2,07 kJ/m^2	According to ISO 180

Thermal Properties

Property	Value	Test method
Heat Deflection Temperature (HDT) @ 1,8 MPa	80°C	According to ISO 78-1

Burning behaviour

Property	Value	Test method
UL 94	V-0 / 3,5mm	According to ISO 60695-11-10 (UL94)

Date of print : 21/03/2022

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Our verbal and written recommendations for the use of our products, including the information provided in this Product Data Sheet, are based upon experience and in accordance with present technological standards. These are only given in order to support the buyer or user. They are non-committal and do not create any additional commitments to the purchase agreement. The buyer is solely responsible for verifying the suitability and/or fitness of our products for the intended use and application. Further, the buyer is solely responsible for the appropriate, safe and legally compliant use, processing, handling and application of our products.

As a part of our product information program each of our Product Data Sheets are periodically updated, so that the latest version shall prevail. Therefore, please contact our sales team to make sure that this Product Data Sheet is the most current version. The information in our Product Data Sheets is subject to change without notification.

This standard form substitutes any and all previous standard forms and notes for customers published on this subject matter. The Technical Information Sheets, if any, and our Terms of Delivery and Payment, each in their latest version form an integral part of this Product Data Sheet.

Certified according to

EN ISO 9001 / 14001

PRODUCT DATA SHEET

TIGITAL® 3D-Set	PPP (Premium Performance Polymer) 371/ 80002
Appearance	Powder
Colour	black
Application	Mass transportation interior
Material Characteristics	Flame retardant material (UN-ECE R.118.03 Annex 6, 7 & 8) Low emissions according automotive interior
Particle Size Distribution	d(0,1): 13µm; d(0,5): 34µm; d(0,9): 67µm (Laser Diffraction)
Density	1,25 ± 0,02 g/cm^3 (According to ISO 1183-3)
Bulk density	0,528 ± 0,02 g/cm^3 (according to DIN 53466)
Residue on ignition	<18 wt.% (According to ISO 3451-1 Method A)
Post-Curing Parameters*	30 min 75°C + 30 min 85°C + 60 min 115°C + 60 min 185°C
Processing*	Selective Laser Sintering (SLS) at temperatures between 60°C - 80°C
Storage Conditions	15-25°C in its originally sealed package in a clean and dry environment for six (6) months upon the date of delivery.

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Mechanical Properties

Property	Value	Test Method
Tensile Modulus	≥ 2100 MPa	According to ISO 527
Tensile Strength	≥ 40 MPa	According to ISO 527
Elongation at Break	≥ 5,5 %	According to ISO 527
Charpy- Unnotched Impact Strength	≥ 2,3 kJ/m^2 (RT)	According to ISO 179
Charpy- Notched Impact Strength	≥ 1,2 kJ/m^2 (-25 °C)	According to ISO 179
Dynstat 3,5% bending test	≥ 55 MPa (RT)	According to DIN 53435

Stress Crack Resistance

Property	Value	Test Method
Blind sample	1 / 1	According to DIN EN ISO 22088-3
MB-window cleaner	1 / 1	According to DIN EN ISO 22088-3
MB-plastic cleaner	1 / 1	According to DIN EN ISO 22088-3
MB-cockpit care	1 / 1	According to DIN EN ISO 22088-3
MB-leather care	1 / 1	According to DIN EN ISO 22088-3
MB-Rinsing agent solution	1 / 1	According to DIN EN ISO 22088-3
Glass cleaner (Sidolin)	1 / 1	According to DIN EN ISO 22088-3
Sun oil test mixture	1 / 1	According to DIN EN ISO 22088-3

PRODUCT DATA SHEET

TIGITAL® 3D-Set	TPP 371/ 80001
Appearance	Powder
Colour	black
Application	TBD
Particle Size Distribution	d(0,1): 15µm; d(0,5): 44µm; d(0,9): 80µm (Laser Diffraction)
Post-Curing Parameters*	30 min 75°C + 30 min 85°C + 60 min 115°C + 60 min 180°C
Processing	Selective Laser Sintering (SLS) at temperatures between 60°C - 80°C
Storage conditions	15-25°C in its originally sealed package in a clean and dry environment for six (6) months upon the date of delivery.

* These post curing and processing parameters are intended to give a guidance only and have to be individually checked and/or adjusted for each respective printed part geometry, used printing conditions and post curing setup by the buyer/user.

Physical Properties

Property	Value	Test method
Density of parts	1,35 g/cm^3	-

Mechanical Properties

Property	Value	Test method
Tensile Modulus	3300 MPa	According to ISO 527
Tensile Strength	45 MPa	According to ISO 527
Elongation at Break	2.4 %	According to ISO 527
Shore D- hardness	78D	According to ISO 868
Charpy- Impact Strength	14 kJ/m^2	According to ISO 179
Charpy- Notched Impact Strength	1,7 kJ/m^2	According to ISO 179
Izod- Impact Strength	13 kJ/m^2	According to ISO 180
Izod- Notched Impact Strength	2,4 kJ/m^2	According to ISO 180
Ball Indentation Hardness	HB44	According to ISO 2039-1

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PRODUCT DATA SHEET

TIGITAL® 3D-Set	TPP High Flex 371/ 80006
Appearance	Powder
Colour	black
Application	TBD
Particle Size Distribution	d(0,1): 15µm; d(0,5): 44µm; d(0,9): 80µm (Laser Diffraction)
Post-Curing Parameters*	30 min 75°C + 30 min 85°C + 60 min 115°C + 60 min 185°C
Processing*	Selective Laser Sintering (SLS) at temperatures between 60°C - 80°C
Storage conditions	15-25°C in its originally sealed package in a clean and dry environment for six (6) months upon the date of delivery.

* These post curing and processing parameters are intended to give a guidance only and have to be individually checked and/or adjusted for each respective printed part geometry, used printing conditions and post curing setup by the buyer/user.

Physical Properties

Property	Value	Test method
Density of parts	1,31 g/cm^3	-

Mechanical Properties

Property	Value	Test method
Tensile Modulus	3200 MPa	According to ISO 527
Tensile Strength	50 MPa	According to ISO 527
Elongation at Break	6 %	According to ISO 527

Thermal Properties

Property	Value	Test method
Heat Deflection Temperature (HDT) @ 1,8 MPa	65°C	According to ISO 78-1

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