TIGITAL® 3D-Set | Technical Data Sheet

PPP 371/80008 BK9/14

General Information

Product Description

TIGITAL® 3D-Set PPP 371/80008 BK9/14 is a thermoset powder material for selective laser sintering (SLS). It exhibits excellent mechanical properties, very low smoke density if burned and is easy to print with vastly lower printing temperatures than standard printing materials on all SLS devices. The moisture uptake is minimal, the reuse-rate is >70% and no pre drying step is necessary. The material is available in black.

Features

- High reuse-rate
- Vastly lower printing temperatures
- Outstanding mechanical properties
- Very low smoke density if burned
- Minimal moisture uptake

Applications

- Rail
- Transportation
- Electronic industry

Material Properties

General Properties*	Test Method	Typical Values
Printed Part Density [kg/m³]	ISO 1183-3	1570
Particle Size d10 [µm]	Laser Diffraction	11
Particle Size d50 [µm]	Laser Diffraction	38
Particle Size d90 [µm]	Laser Diffraction	80

Thermal Properties*	Test Method	Typical Values
HDT/A (1.8 MPa) [°C]	ISO 75	60

Burning Behaviour*	Test Method	Typical Values
UL 94	ISO 60695-11-10	V0 - 2.5 mm
EN 45545 R22 [%]	EN ISO 4589-2 OI	HL3 – 50
EN 45545 R22	EN ISO 5659-2 $D_s$max	HL3 – 42.6
EN 45545 R22	EN 17084 - 1 CITG	HL3 – 0.15

Mechanical Properties*	Test Method	Typical Values
Tensile Strength [N/mm²]	ISO 527	38
Tensile Modulus [N/mm²]	ISO 527	4000
Elongation at Break [%]	ISO 527	1.5
Flexural Strength [N/mm²]	ISO 178	50
Flexural Modulus [N/mm²]	ISO 178	4200

** All properties are measured on printed ISO specimen (properties correspond to printing parameters)*

Product Safety

Relevant industrial safety precautions and hygiene procedures must be followed (e.g. powder handling). For additional information please read the corresponding Material Safety Data Sheet (MSDS).

Compatibility

The product is compatible with all SLS printing machines. For specific printing parameters and additional post-curing steps please read the corresponding Processing Data Sheet (PDS).

Storage

The powder should be stored at temperatures from 15-25 °C in its originally sealed package in a clean and dry environment for 6 months upon delivery date.

Disclaimer

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.

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