

# Technical Data Sheet Innofil3D PLA

Rev 141030

Monofilament suitable for all commercially available leading brands 3D FDM/FFF printers

## IDENTIFICATION OF THE MATERIAL

Trade name	Innofil3D PLA
Chemical name	Polylactic Acid
Chemical family	Thermoplastic Polyactic Acid
Use	3D-Printing
Company	Innofil3D BV

## MATERIAL PROPERTIES

MATERIAL PROPERTIES			Test Method
Melting point	145-160°C		ASTM D1003
Density	1240 kg/m <sup>3</sup>		ASTM D1505
Tensile strength	110 MPa 145 MPa	MD injection molding TD injection molding	ASTM D882 ASTM D882
Elongation at break	160% 100%	MD injection molding TD injection molding	ASTM D882 ASTM D882
Tensile modulus	3310 MPa 3860 MPa	MD injection molding TD injection molding	ASTM D882 ASTM D882
Food contact	Listed on page 2		

## MONOFILAMENT DATA

MONOFILAMENT DATA			Test Method
Diameter 1.75	1.75 ± 0.05 mm		Innofil3D
Diameter 2.85	2.85 ± 0.10 mm		Innofil3D
Diameter 3.00	3.00 ± 0.10 mm		Innofil3D
Max. roundness deviation 1.75	0.05 mm		Innofil3D
Max. roundness deviation 2.85	0.10 mm		Innofil3D
Max. roundness deviation 3.00	0.10 mm		Innofil3D
Print temperature guideline	220 ± 10°C		Innofil3D
Print speed guideline	40 - 80 mm/s		Innofil3D

This overview is generated using information obtained from the raw material suppliers.

Colour	Code	RAL nr.	Certifications/approvals				
			10/2011 <sup>1</sup>	FDA <sup>2</sup>	BfR <sup>3</sup>	2011/65 <sup>4</sup>	EN 71-3 <sup>5</sup>
Naturel	0001	N/A	Yes	Yes	Yes	Yes	Yes
Black	0002	9005	Yes	Yes	Yes	Yes	Yes
White	0003	9010	Yes	Yes	Yes	Yes	Yes
Red	0004	3020	Yes	No	Yes	Yes	Yes
Blue	0005	5022	Yes	Yes	Yes	Yes	Yes
Yellow	0006	1003	Yes	Yes	Yes	Yes	Yes
Green	0007	6018	Yes	Yes	Yes	Yes	Yes
Orange	0009	2008	Yes	No	Yes	Yes	Yes
Pearl White	0011	1013	Yes	Yes	Yes	Yes	Yes
Violet	0012	4008	Yes	Yes	Yes	Yes	Yes
Chocolate Brown	0013	8017	Yes	Yes	Yes	Yes	Yes
Gold	0014	1036	Yes	Yes	Yes	Yes	Yes
Light Blue	0015	5012	Yes	Yes	Yes	Yes	Yes
Pink	0020	N/A	Yes	No	No	Yes	Yes
Silver	0021	9006	Yes	Yes	Yes	Yes	Yes
Magenta	0022	4010	Yes	No	Yes	Yes	Yes
Grey	0023	7045	Yes	No	Yes	Yes	Yes
Bronze	0032	8008	Yes	Yes	Yes	Yes	Yes
Sky Blue	0035	N/A	Yes	Yes	Yes	Yes	Yes
Orange Translucent	0010	1028*	Yes	Yes	Yes	Yes	Yes
Blue Translucent	0024	5022*	Yes	Yes	Yes	Yes	Yes
Dark Green Translucent	0025	6005*	Yes	Yes	Yes	Yes	Yes
Ice Blue Translucent	0026	5024*	Yes	Yes	Yes	Yes	Yes

Certifications/approvals	Description
<sup>1</sup> Regulation EU No 10/2011:	Union Guidelines on Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food (Europe)
<sup>2</sup> FDA:	Food and Drug administration approval (U.S.A.)
<sup>3</sup> BfR-empfehlung:	No migration of substances with a health risk occurs from the contact materials to the foods (Germany)
<sup>4</sup> Directive 2011/65/EU:	The restriction of the use of certain hazardous substances in electrical and electronic equipment (Europe)
<sup>5</sup> Directive 2009/48/EC; EN 71-3:	Safety of toys – Part 3: Migration of certain elements (Europe)

\* RAL number used to manufacture the transparent colour.