# Technical Data Sheet InnoFlex 45 by Innofil3D BV 

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

## IDENTIFICATION OF THE MATERIAL

| Trade name | InnoFlex45 |
| :--- | :--- |
| Chemical name | Thermoplastic Copolyester Elastomer. |
| Chemical family | Biobased Thermoplastic copolyester(TPC) |
| Use | 3D-Printing |
| Origin | Innofil3D BV |

GUIDELINE FOR PRINT SETTINGS

| Nozzle temperature | $230 \pm 20^{\circ} \mathrm{C}$ |
| :--- | :--- |
| Bed temperature | Up to $60^{\circ} \mathrm{C}$ |
| Bed modification | Heated bed or tape. |
| Active cooling fan | Yes (up to $100 \%$ ). |
| Layer height | $0.1-0.2 \mathrm{~mm}$ |
| Shell thickness | $0.8-2.0 \mathrm{~mm}$ |
| Print speed | $20-50 \mathrm{~mm} / \mathrm{s}$ |

Settings are based on a 0.4 mm nozzle

| MATERIAL PROPERTIES |  | Test Method |
| :--- | :--- | :--- |
| Melt temperature $(\mathrm{Tm})$ | $180^{\circ} \mathrm{C}$ | ASTM D3418 |
| Glass transition temperature $(\mathrm{Tg})$ | $-35^{\circ} \mathrm{C}$ | ASTM D3418 |
| Melt Flow Rate $(\mathrm{MFR})^{1}$ | Not determined. | ISO 1133 |
| Melt Volume Rate $(\mathrm{MVR})^{1}$ | Not determined. | ISO 1133 |
| Density $(\rho)$ | $1.15 \mathrm{~g} / \mathrm{cm}^{3}$ | ASTM D1505 |
| Odor | Odorless. | $/$ |
| Solubility | Insoluble. | $/$ |
| ${ }^{1}$ Test conditions: $\mathrm{T}=210^{\circ} \mathrm{C} ; \mathrm{m}=2.16 \mathrm{~kg}$ |  |  |


| FILAMENT SPECIFICATIONS |  | Test Method |
| :--- | :--- | :--- |
| Diameter 1.75 | $1.75 \pm 0.05 \mathrm{~mm}$ | Innofil3D |
| Diameter 2.85 | $2.85 \pm 0.10 \mathrm{~mm}$ | Innofil3D |
| Max. roundness deviation 1.75 | 0.05 mm | Innofil3D |
| Max. roundness deviation 2.85 | 0.10 mm | Innofil3D |
| Net weight on reel | $750 \mathrm{~g} \pm 2 \%$ | Innofil3D |

