Technical Data Sheet

Filament-Tile Silica

FILAMENT-Tile Silica is a composite material made of frit particles supported by a biodegradable polymer matrix for printing designs that will form a glass decoration after a thermal treatment at 800-900°C. **FILAMENT-Tile Silica** is coloured in blue, yellow or red by the presence of inorganic pigments. After the recommended thermal cycle the decorations printed with **FILAMENT-Tile Silica** on tiles are a glassy coloured relief.

Filament features

Particle	Frit
Polymeric matrix	PLA
Particle loading (wt.%/vol.%)	60 wt.%/ 40 vol.%
Diameter	1.75 ± 0.15 mm
Density	1.84 g/cm^3
Linear Density	0.46 g/cm
Format	Spool vacuum packed

Thermal Properties

Glass Transiction	60 ºC
Melting Temp.	150 ºC
Degradation Temp.	320 ºC

Printing Recommendations

Printing Temp.	165-175 ºC
Hot Pad	40-80 ºC
Printing Speed	10-60 mm/s
Layer Height	≥ 0.15 mm
Nozzle Diameter	≥ 0.4 mm
Head travel speed	< 150 mm/s
Stand-by Temp.	30 ºC below Printing Temp or <140 °C

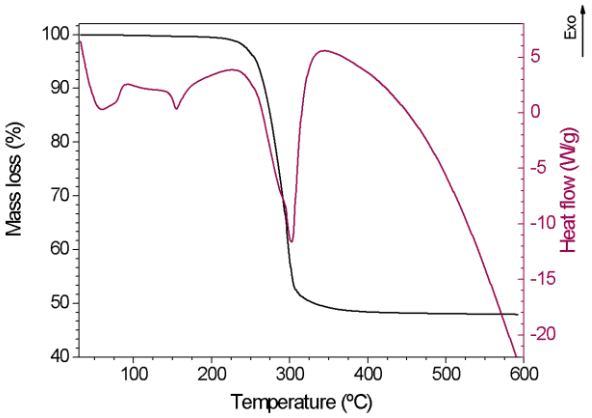
Storage Conditions

Keep in dry place
Protect from direct sunlight
Storage between 5ºC- 30ºC

Specific properties

Made of frit the composite forms glassy decorations after thermal treatment.
Treatment up to 900°C to achieve a dense piece.

Thermal behavior



Filament cross-section

Printing Examples

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