INNOSELF®

Discover the diverse SMPs that can be applied to your product.

01 INNOSELF® 1 | PCL-PGMA

Powder

Properites	Data	Unit	Range
Density	1.03 ~ 1.09	g/cc	0 0.35 0.75 1.25 1.5
Melting point(Tm)	28 ~ 48	°C	0 50 100 150 200
Elongation at break	350 ~ 600	%	0 500 1000 1500 2000
Tensile stress at break	0.7 ~ 13	MPa	0 8 16 24 32
Young's modulus	2.0 ~ 100	MPa	0 275 550 825 1100
Glass transition temperature (Tg)	-55 ~ -60	°C	-

Features

- In situ programming
- Body temperature responsive shape recovery
- High biocompatibility
- Excellent biofilm suppression
- A wide range of physical properties adjustable
- Suitable for implantable medical devices
- Possible for blending & composite with various polymers
- Applicable for 3D & 4D printing
- Properties and characteristics easily controllable with various structures

Applications

- Medical Device (Stent, Tube, Suture)
- 3D & 4D Printing Resin

02 INNOSELF® 2 | PCL-PDMS-PGMA Silicone/PCL-PGMA

Resin

Properites	Data	Unit	Range
Density	1.03 ~ 1.09	g/cc	0 0.35 0.75 1.25 1.5
Melting point(Tm)	30 ~ 44	°C	0 50 100 150 200
Elongation at break	80 ~ 2,000	%	0 500 1000 1500 2000
Tensile stress at break	0.7 ~ 4.8	MPa	0 8 16 24 32
Young's modulus	1.0 ~ 20	MPa	0 275 550 825 1100
Glass transition temperature (Tg)	-55 ~ -60	°C	-

Features

- Excellent tension & compression rate
- Body temperature responsive shape recovery
- High biocompatibility
- Biofilm suppression effect
- A wide range of physical properties adjustable
- Suitable for implantable medical devices

Applications

- Medical Device (Silicone replacement prosthesis, Silicone material medical device)

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03 INNOSELF® 3 | PLA-g-PCL

Powder Granule Filament

Properites	Data	Unit	Range
Density	1.15 ~ 1.25	g/cc	0 0.35 0.75 1.25 1.5
Melting point(Tm)	150 ~ 165	°C	0 50 100 150 200
Elongation at break	170 ~ 330	%	0 500 1000 1500 2000
Tensile stress at break	18 ~ 32	MPa	0 8 16 24 32
Young's modulus	300 ~ 1,100	MPa	0 275 550 825 1100
Glass transition temperature (Tg)	35 ~ 45	°C	-

Features

- Hard mechanical strength
- Body temperature responsive shape recovery (Tg)
- High biocompatibility
- Biofilm suppression effect
- A wide range of physical properties adjustable
- Suitable for implantable medical devices
- Possible for blending & composite with various polymers
- Applicable for 3D & 4D printing

Applications: Medical Device (High-strength device, Stent) | Engineering Industry | 3D & 4D Printing Filament

04 INNOSELF® 4 | Conjugated PCL-PGMA

Powder

Properites	Data	Unit	Range
Density	(Different for each inorganic particle content)		-
Melting point(Tm)	36 ~ 40	°C	0 50 100 150 200
Elongation at break	135 ~ 263	%	0 500 1000 1500 2000
Tensile stress at break	3.5 ~ 4.4	MPa	0 8 16 24 32
Young's modulus	8 ~ 26.5	MPa	0 275 550 825 1100
Glass transition temperature (Tg)	-55 ~ -60	°C	-

Features

- Fast degradation possible
- Body temperature responsive shape recovery
- High biocompatibility
- Biofilm suppression effect
- A wide range of physical properties adjustable
- Suitable for implantable medical devices
- Possible for blending & composite with various polymers
- Applicable for 3D & 4D printing

Applications: Degradable Medical Supplies (e.g. Suture) | Coating | Tissue Engineering Scaffolds