

# Finding the suitable material for every O&P application.



## CHRONIC PATHOLOGIES

TPU      PP      PETG

FLEXIBLE      SEMI-RIGID      RIGID

**FFF PRINTING**  
(FILAMENT-BASED)

Low cost, easy to operate

## (POST)TRAUMATIC PATHOLOGIES

ST45

FLEXIBLE      SEMI-RIGID      RIGID

**SLA/DLP PRINTING**  
(RESIN-BASED)

High quality, fast printing times

## CHRONIC PATHOLOGIES

TPU      PA11/PA12      PP

FLEXIBLE      SEMI-RIGID      RIGID

**SLS/MJF PRINTING**  
(POWDER-BASED)

High quality, high volumes

← Small investment      Large investment →

# Materials Selection Table



Materials	FFF (Filament)					SLS/MJF (Powder)		SLA/DLP (Resin)
	PP	PET Carbon reinforced	PLA	PETG	TPU	PA11 (Nylon 11)	TPU	ST45
Color	Black, White Translucent	Black, White	Black, White	Black, White	/	/	/	Clear, Black, Translucent
Durability	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Flexibility	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Surface Finish	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Printing accuracy	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Impact Resistant	No	No	No	No	No	Yes	No	Yes
Water Resistant	Yes	Yes	No	Yes	No	Yes	No	No
Density	0.9 g/cm <sup>3</sup>	1.37 g/cm <sup>3</sup>	1.24 g/cm <sup>3</sup>	1.32 g/cm <sup>3</sup>	1.21 g/cm <sup>3</sup>	1.05 g/cm <sup>3</sup>	0.78 g/cm <sup>3</sup>	1.2 g/cm <sup>3</sup>
Properties	Very polyvalent Low density Good finishing High elasticity Good resistance to fatigue	Very strong and stiff Dimensional stability Excellent finish	Precise printing Stiff, good strength Low melting point Easy to print Biodegradable	Waterproof Very precise printing Food approved 100% recyclable	Very flexible and soft Chemical and abrasion-resistant	Lightweight Flexible High impact resistance From 100% renewable source Biocompatible	Very flexible Complex designs High elasticity and flexibility	Biocompatible Great details High strength, toughness, impact resistance Fast printing
Recommended Applications	Most of Spentys products (hand and forearm splints)	Masks Helmets Prosthetics	Moulds	Prosthesis covers	Complex designs	Prosthetics Insoles Moulds	Moving and assembled parts Leg splints	Hand and forearm splints for traumatic applications (fast-printing time)