



POWDERS module

Range



PERFORMANCE
set



OPEN
set



ENTRY
set

PA12 Industrial	PA12 Smooth	PA12 Smooth
PA11^N Onyx	PA11^N Onyx	
PA11 CF^N	PA11 CF^N	
PA11 ESD^N	PA11 ESD^N	
PP	PP	
FLEXA Performance	FLEXA Black	FLEXA Black
	FLEXA Soft	
	FLEXA Bright	
New PBT Optimal		

Powders

Standard



22%
REFRESH
RATIO



30%
REFRESH
RATIO



20%
REFRESH
RATIO

	PA12 Smooth (4kg starter - FZ127, 2kg fresh - FZ009, 6kg fresh - FZ107)	PA12 Industrial (6kg fresh - FZ194)	PBT (6kg fresh - FZ210)
	<ul style="list-style-type: none"> • Super smooth surface • Excellent quality print with excellent details • Good quality-to-price ratio • High chemical resistance 	<ul style="list-style-type: none"> • Very good dimensioning accuracy • Excellent mechanical properties • Biocompatible • High chemical resistance 	<ul style="list-style-type: none"> • Optimal PPP (price-per-part) • Very good dimensioning accuracy. • High stiffness • Electrical insulation • High density (weight)
Tensile Strength (MPa)	32	52,3	
Charpy Impact unnotched [kJ/m ²]	16	30 ²	
Flexural Modulus [MPa]	1 160	1380	
Tensile Modulus [MPa]	1 470	1 840	
Stiffness	**	**	***
Accuracy	**	***	***
Surface	***	**	**
	\$138/ kg \$150 for powder In 2 kg container	\$99 or \$138/ kg Depending on selling plan ¹	\$89 or \$99/ kg Depending on selling plan ¹

Offer
Q4/23
S. 10

POWDERS

1. Special powder price for heavy users ordering at least 60 kg at a time. Only available in selected locations.
2. PA12 Industrial - preliminary results only * - lower impact values without nitrogen

Powders

Special functions



33%
REFRESH
RATIO



40%
REFRESH
RATIO



60%
REFRESH
RATIO

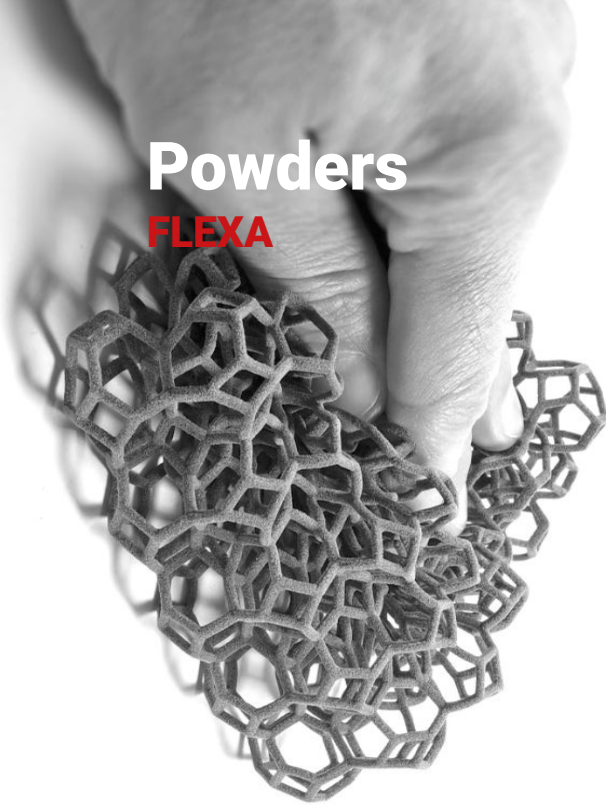


50%
REFRESH
RATIO

N ₂ needed	PA11 ONYX (6kg starter - FZ109, 2kg fresh - FZ055, 6kg fresh - FZ108)	PA11 CF (6kg fresh - FZ155)	PA11 ESD (6kg fresh - FZ125)	PP (6kg fresh - FZ143)
		<ul style="list-style-type: none"> High mechanical strength High impact strength Dimensional stability High ductility Bio-sourced (castor oil) 	<ul style="list-style-type: none"> High mechanical strength High stiffness Good surface quality Great thermal resistance Good impact resistance Good chemical resistance 	<ul style="list-style-type: none"> Antistatic properties Better thermal properties Dimension stability
Tensile Strength (MPa)	48	81	46	19
Impact resistance (kJ/m ²)	179	113	59	30
HDT @0.45MPa	150 °C	191 °C	171 °C	85 °C
Surface quality	*	**	**	*
Prototyping	✓	✓	✓	✓
Functional	✓	✓	✓	✓
Cost-efficient	**	*	*	*
	\$150/ kg \$165 for powder In 2 kg container	\$150/ kg	\$160/ kg	\$175/ kg

Powders

FLEXA



20%
REFRESH
RATIO



0%
REFRESH
RATIO



0%
REFRESH
RATIO



0%
REFRESH
RATIO

	Flexa Performance (6kg fresh - FZ198)	Flexa Black (2kg fresh - FZ015, 6kg fresh - FZ226)	Flexa Bright (2kg fresh - FZ053)	Flexa Soft (2kg fresh - FZ052)
	<ul style="list-style-type: none"> Resistant to repeated bending Very good tear resistance Chemical resistance 	<ul style="list-style-type: none"> Flexible prints with increased extensibility adjustable hardness 100% reusable 	<ul style="list-style-type: none"> High mechanical TPU High-elongation Bright colour Ability to dye 	<ul style="list-style-type: none"> Low Shore hardness Elasticity Soft to touch
Shore hardness	A86/A88	A70/A90	A79	A45-A58
Elongation	100%	136%	318%	137%
Surface quality	**	**	**	**
Prototyping	✓	✓	✓	✓
Functional	✓	-	-	-
Cost-efficient	**	**	**	**
	\$175/ kg	\$175/ kg \$160 for powder In 2 kg container	\$285/ kg	\$255/ kg

POWDERS