9 March, 2016

Material Specification Print Sheet

BendLay

Modified Butadiene

Kai Parthy

		
Not Yet Printed	**Not Yet Printed**	**Not Yet Printed**

Pre and Post Processing:

A heated glass build plate is normally sufficient to get BendLay to adhere to the bed, although for large areas, non lubricating hairspray is recommended.

While this is a moderately flexible material, it is not equivalent to Ninjaflex or Flexible PLA, so it may break under stress.

HAZARDS (rating 1-10)

May release fumes that are irritating to the respiratory system. Print in a ventilated space.

9 March, 2016

Material Specification Print Sheet

Settings to print with	Prime/Unprime:
Temp Range: 200-250°C (235 ideal) Recommended flow multiplier: 0.8 Recommended layer size: .2-.3 Build Plate Temp: 65°C Recommended Fan: 70-100%	Steps: 100 / Steps: 100 Rate: 10,000 / Rate: 10,000 Time (ms): 25 / Time (ms): 20 Primes after Tool Change: 1 / Primes after Tool Change: 1
How well it handles prints	**Properties of Material**
Overhangs: ~35° Retraction: 3 Circles: 4 Layer change: 3 Fine detail: 4 Curling: 4	Modulus of Elasticity: Yield Strength: Fracture Point: Modulus of Elasticity in Bending: *All parts done with a ___% infill*

Chemical	Water	Vinegar	HCl	Acetone	HF	Sulfuric Acid
Resistance (High/Limited/None)						
Chemical	Aqua Regia	Bleach	Gasoline	Methyl Alcohol	Ethyl Alcohol	NaOH
Resistance (High/Limited/None)						

Images (Left to right, top to bottom): Single walled vase, Artifact/Feature size test, Retraction/Feature size test, arch, top of overhang test, bottom of overhang test.

Overhang: Minimum angle to the horizontal at which layers are relatively unperturbed.

Print handling parameters: 5-optimal, 4-very good, 3-fair, 2-passable, 1-very poor

Chemical Resistance: High-no observable affect after a long period of time, Limited-Slight affects over time (swelling, discoloration, slight softening, etc), None-very severely affected by chemical.

9 March, 2016

Material Specification Print Sheet

NOTES:

-Bendlay has a tendency to be slightly brittle at the change from large area to small area, as the thinner pieces are much more flexible than the thick pieces, so be careful removing a part if it has a thin bottom. You can, however, reattach the bottom to the top by using a torch to melt one part and quickly attach the second (be careful as you may accidentally set your part on fire).