

# NINJAFLEX

## THERMOPLASTIC POLYURETHANE - NINJATEK



### Pre and Post Processing

Ninjaflex does not need any additional coatings added to the bed other than the heat. Note that ninjaflex may stick to some tapes stronger than the tape sticks to the bed.

A very light application of heat after removing support, etc. can help to remove strings.



### HAZARDS (rating 1-10)

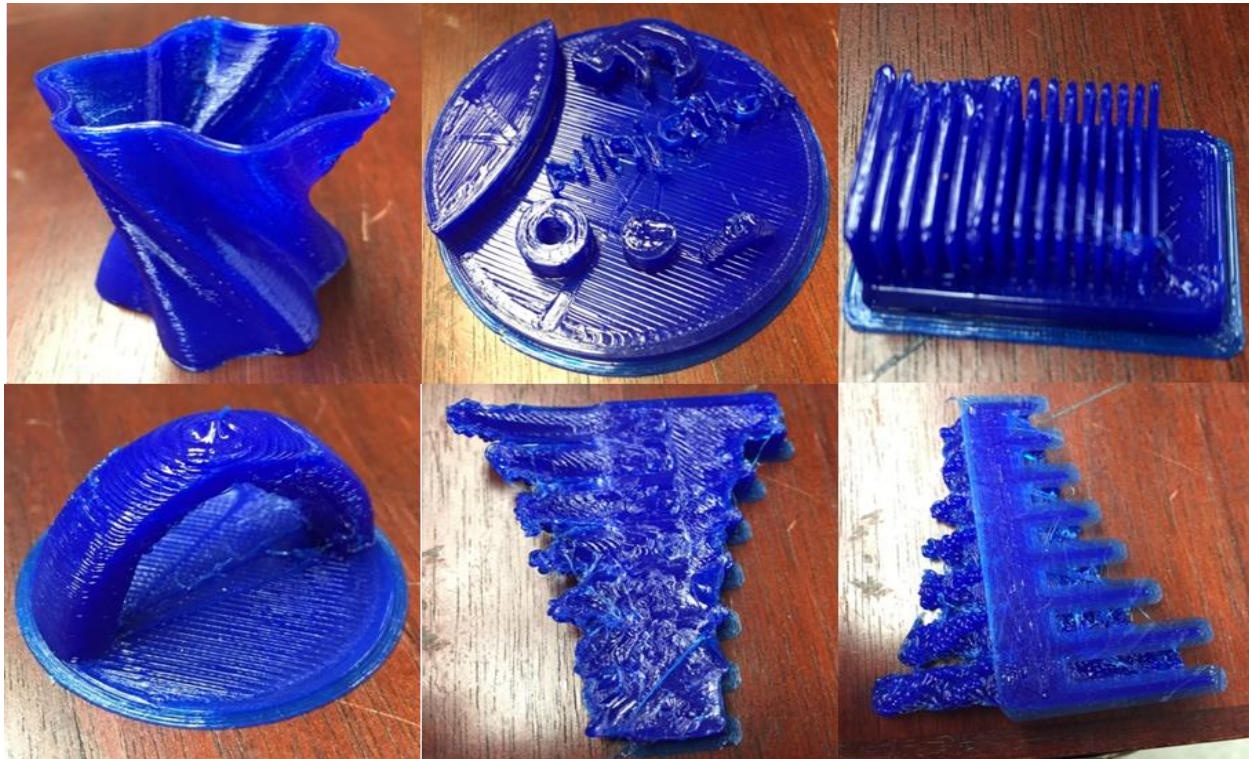
Ninjaflex should be printed in ventilated areas, as it may produce small amounts of fumes when melted. It is not recommended for use with any food products.

Note that ninjaflex will begin to degrade in water if left for a prolonged period of time.

<p><b>SETTINGS TO PRINT WITH</b></p> <ul style="list-style-type: none"> <li>Temp Range: 210-225°C</li> <li>Recommended flow multiplier: 1.000</li> <li>Recommended layer size: 0.2-0.4</li> <li>Build Plate Temp: 30-50°C</li> <li>Recommended Fan: 50%</li> </ul>	<p><b>PRIME/UNPRIME:</b></p> <table border="0"> <tr> <td>Steps: 250</td> <td>Steps: 230</td> </tr> <tr> <td>Rate: 10,000</td> <td>Rate: 10,000</td> </tr> <tr> <td>Time (ms): 70</td> <td>Time (ms): 20</td> </tr> <tr> <td>Primes after Tool Change: 1</td> <td>Primes after Tool Change: 1</td> </tr> </table>	Steps: 250	Steps: 230	Rate: 10,000	Rate: 10,000	Time (ms): 70	Time (ms): 20	Primes after Tool Change: 1	Primes after Tool Change: 1
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<p><b>HOW WELL IT HANDLES PRINTS</b></p> <p>Overhangs: 45°                  Retraction: 3                  Circles: 5                  Layer change: 4                  Fine detail: 3                  Curling: 2</p>	<p><b>PROPERTIES OF MATERIAL</b></p> <p>Modulus of Elasticity:                  Yield Strength:                  Fracture Point:                  Modulus of Elasticity in Bending:  <i>All parts done with a ___% infill</i></p>								



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



*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.*



NOTES:

Unsupported Ninjaflex does not respond well to sharp corners, so it is suggested to put some amount of bevel on all corners.