



Material Specification Print Sheet

ABS-Polycarbonate Alloy

PC-ABS Alloy

Proto Pasta



Pre and Post Processing:

Heated glass build plate and hairspray is sufficient to get this to adhere to the bed at small sized prints, for larger sizes, a heated area is highly recommended.

Post processing can be done by using various different grits of sandpaper, and/or using a coating spray to make the finish shiny and smooth.

HAZARDS (rating 1-10)

This has the same hazards as ABS and Polycarbonate, releasing a minor amount of fumes during the printing process. Print in a ventilated space.



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<p style="text-align: center;">Settings to print with</p> <p>Temp Range: 255-280°C</p> <p>Recommended flow multiplier: 1.000</p> <p>Recommended layer size: 0.1-0.3</p> <p>Build Plate Temp: 90°C</p> <p>Recommended Fan: 100%</p>	<p style="text-align: center;">Prime/Unprime:</p> <table border="1" style="width: 100%;"> <tr> <td>Steps: 100</td> <td>Steps: 100</td> </tr> <tr> <td>Rate: 10,000</td> <td>Rate: 10,000</td> </tr> <tr> <td>Time (ms): 25</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: 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
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<p style="text-align: center;">How well it handles prints</p> <p>Overhangs: 25°</p> <p>Retraction: 3</p> <p>Circles: 4</p> <p>Layer change: 4</p> <p>Fine detail: 5</p> <p>Curling: 3</p>	<p style="text-align: center;">Properties of Material</p> <p>Modulus of Elasticity:</p> <p>Yield Strength:</p> <p>Fracture Point:</p> <p>Modulus of Elasticity in Bending:</p> <p><i>All parts done with a ___% infill</i></p>								

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.



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NOTES:

-Make sure your extruder is capable of handling the high temperatures required for printing this alloy before you attempt it. If the temperature is too high, it can result in a failed print or even major damage on your print head. In addition, some heating elements may not be able to sustain high temperatures.

-As with most materials, printing cool makes the layer adhesion worse. So, while this material will actually print at temperatures as low as 230°C, the final part at this temperature will be too weak to really take advantage of the properties of the PC-ABS alloy.