

PC requires all-metal hotend, 100°C+ bed, zero cooling fan, and enclosed chamber — all simultaneously. Missing any one condition will cause failure.

Requirement	Specification	If Not Met
NON-NEGOTIABLE REQUIREMENTS 7 items		
All-metal hotend	Required — no PTFE-lined hotend above 240°C	PTFE off-gases and contaminates the melt at PC temps.
Nozzle temperature	270–300°C	Under-extrusion, poor layer bonding, surface defects.
Bed temperature	100–120°C throughout print	Warping, corner lifting, part releases from bed.
Cooling fan	Off entirely — 0% — no exceptions	Layer delamination during or after printing.
Enclosure	Fully closed throughout print	Warping and mid-print delamination from ambient cool.
Drying	80°C for 8 hrs (paper spool: 100°C)	Severe stringing, rough surface, poor layer quality.
Bed adhesion	Thin glue stick layer on PEI	PC bonds so aggressively it may destroy the bed.
FAILURE MODE DIAGNOSIS 5 items		
Corner warping	Bed < 100°C, no enclosure, or cooling on	Check all three simultaneously before reprinting.
Delamination mid-print	Enclosure open or cooling fan > 0%	Close enclosure. Confirm fan is fully disabled.
Stringing / rough surface	Dry filament	Dry at 80°C for 8 hours before resuming.
Poor first layer	Z offset too high or insufficient glue stick	Re-level. Apply fresh thin glue stick coat.
Part stuck to bed	No glue stick — PC bonds aggressively	Glue stick is a release agent, not adhesive.