

**NOTE: There is an error in the Print Temperature in the table below.  
Print Temperature for t-glase is 238C to 245C**

	<a href="http://www.taulman3d.com">www.taulman3d.com</a>					
	<b>Specification</b>	<b>t-glase Clear</b>	<b>t-glase Green</b>	<b>t-glase Blue</b>	<b>t-glase Red</b>	<b>t-glase Black</b>
<i>Notes:</i>	<b>Technical</b>					
1	Manufacture Part ID	tgc1/tgc3	tgg1/tgg3	tgb1/tgb3	tgr1/tgr3	tqk1/tqk3
	HS Code	3916.9	3916.9	3916.9	3916.9	3916.9
	<b>Thermal</b>					
2	Printing Temperature	228C	228C	228C	228C	225C
	Melting Temperature	207C	207C	207C	207C	207C
3	Tg Glass transition	76C	76C	76C	76C	76C
4	Pyrolysis - Thermal degradation	282C	282C	282C	282C	282C
	Non-Destructive Evaluation	Yes	Yes	Yes	Yes	Yes
5	Print-Bed Temp	68C Max	68C Max	68C Max	68C Max	68C Max
6	Ambient Temp (Enclosure)	None	None	None	None	None
	<b>Physical</b>					
	Nominal Diameter (3mm Maximum Dia)	1.75mm/2.85mm	1.75mm/2.85mm	1.75mm/2.85mm	1.75mm/2.85mm	1.75mm/2.85mm
	Weight /spool	1 lb	1 lb	1 lb	1 lb	1 lb
	Nominal Length/spool (In Feet)	512/190	512/190	512/190	512/190	512/190
7	Shrinkage - in/in	0.0028	0.0029	0.0031	0.0031	0.0029
8	Solvent/Glue	Tetrahydrofuran	Tetrahydrofuran	Tetrahydrofuran	Tetrahydrofuran	Tetrahydrofuran
9	<b>Mechanical</b>					
	Tensile Stress "PSI" when 3D Printed	4,516	4,516	4,516	4,480	4,440
	Ultimate Elongation when 3D Printed	7.80%	7.80%	7.80%	9.10%	10.40%
	Modulus "PSI" when 3D Printed	80,315	80,315	80,315	80,315	80,315
	<b>Optical</b>					
	Opacity	6%	21%	34%	39%	48%
	Reflectivity	5-8%	5-8%	5-8%	5-8%	4%
10	Color	Natural	Green	Blue	Red	Black
	<b>Approvals</b>					
	FDA - Direct Food Contact	Yes	Yes	Yes	Yes	Yes
	FDA Direct Drink Contact	Yes	Yes	Yes	Yes	Yes
	<b>UL Flammability</b>					
	UL 94 HB	None	None	None	None	None
	UL 94 V2 at 3.2 mm thickness	None	None	None	None	None
	<b>Features:</b>					
	Surface texture	N/A	N/A	N/A	N/A	N/A
11	Living Hinge	Excellent	Very good	Very good	Very good	Very good
	Use of Taps for threads	Very good	Very good	Very good	Very good	Very good
	CNC finish tooling	Carbide	Carbide	Carbide	Carbide	Carbide
12	CNC Coolant	Forced Air Only	Forced Air Only	Forced Air Only	Forced Air Only	Forced Air Only
	Use in 3D Forging	Very good	Very good	Very good	Very good	Very good
	Printed Prosthesis	N/A	N/A	N/A	N/A	N/A
	Robotic Assemblies	Very good	Very good	Very good	Very good	Very good
	Jewelry Printing	Excellent	Very good	Excellent	Excellent	Very good
	Fumes	None	None	None	None	None
	Lenticulated overlays.	Excellent	N/A	N/A	N/A	N/A
	Dye type	N/A	N/A	N/A	N/A	N/A
	Dye Uptake (Saturation)	N/A	N/A	N/A	N/A	N/A
	Specifications are subject to change.					

NOTE: Both Nylon and t-glase will NOT seize in your hotend even if left in place with heater "ON" for 72hr's. Both will oxidize and extrude soot upon reactivation.  
150mm of purge is all that is required to begin printing anew.

Notes:

1. Manufacturer ID is self assigned and used for Production and shipping references
2. Based on an average of reported values. Nominally 5C lower with SeeMECNC and E3D HE's due to their structures
3. Note on t-glase...If the platform cools faster than the part, then a glass platform may suffer cracks. Tg on Nylon can be misleading due to nylon's structure

4. Pyrolysis is basically "Boiling" ....Check your thermistor!
5. Print Bed temperature for nylons is a function of reducing the "shock" from layer to layer. Shock is defined as the time between layers such that the temp diff is at it's greatest.
6. Small parts in t-glase need a fan on the part being printed due to it's Tg
7. Moisture plays a strong part in shrinkage. Less moisture = less shrinkage.
8. To adhere nylon to nylon, use a soldering iron.
9. Testing performed by St Louis Testing Laboratories
  - Unit = 5500R Instron with Bluehill Software....
  - ASTM D412-0a E2
  - 5 pc's printed at rated temperature
  - Bars are .1314" thk
  - 1 perimeter
  - All surfaces (no fill, just surfaces)
  - 45 degree surfaces
10. As natural is not a specific color, we are working on a Pantone equivalent.
11. Living hinge is using the material flexible properties as a hinge assuming 2000 90 degree transitions.
12. As nylon will take on water, only air cooling should be used.