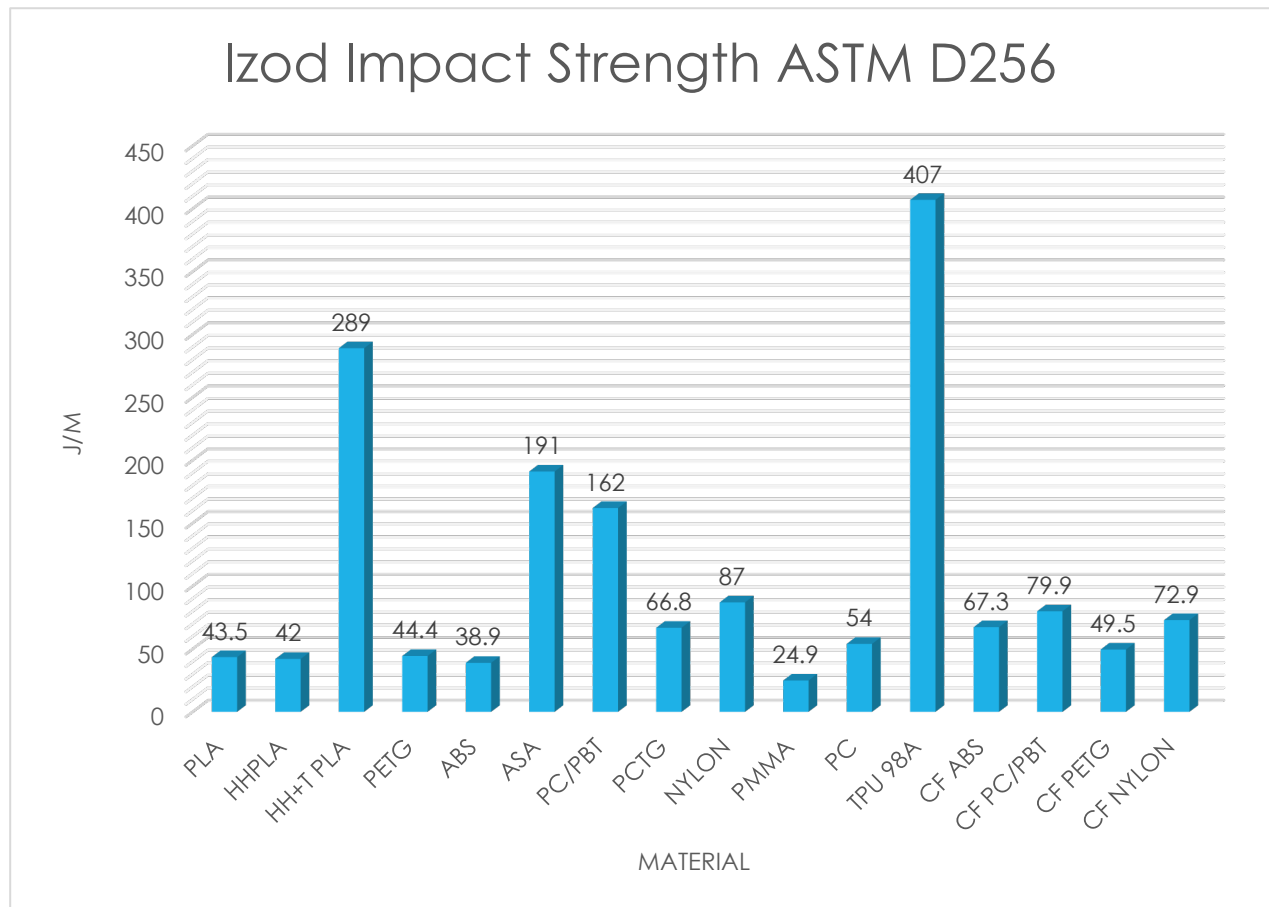




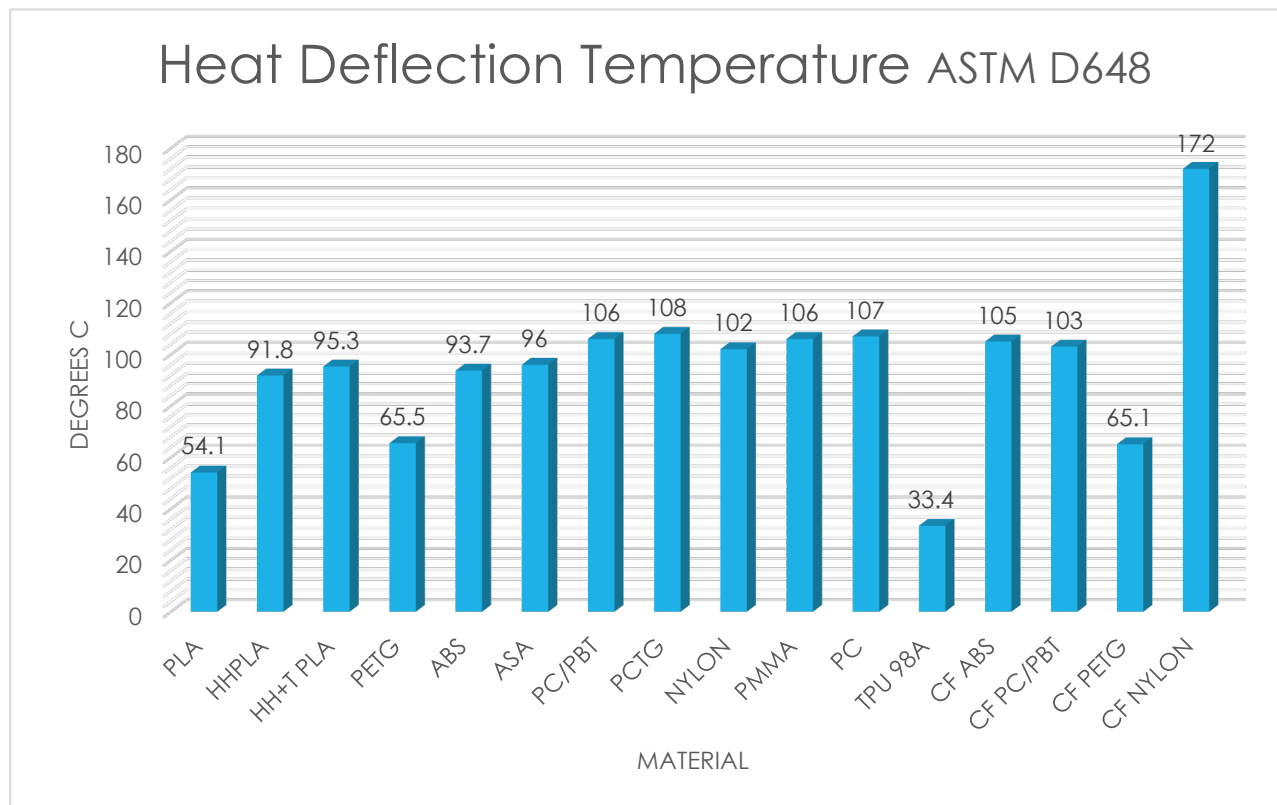
Technical Data Material Comparisons

PHYSICAL PROPERTIES

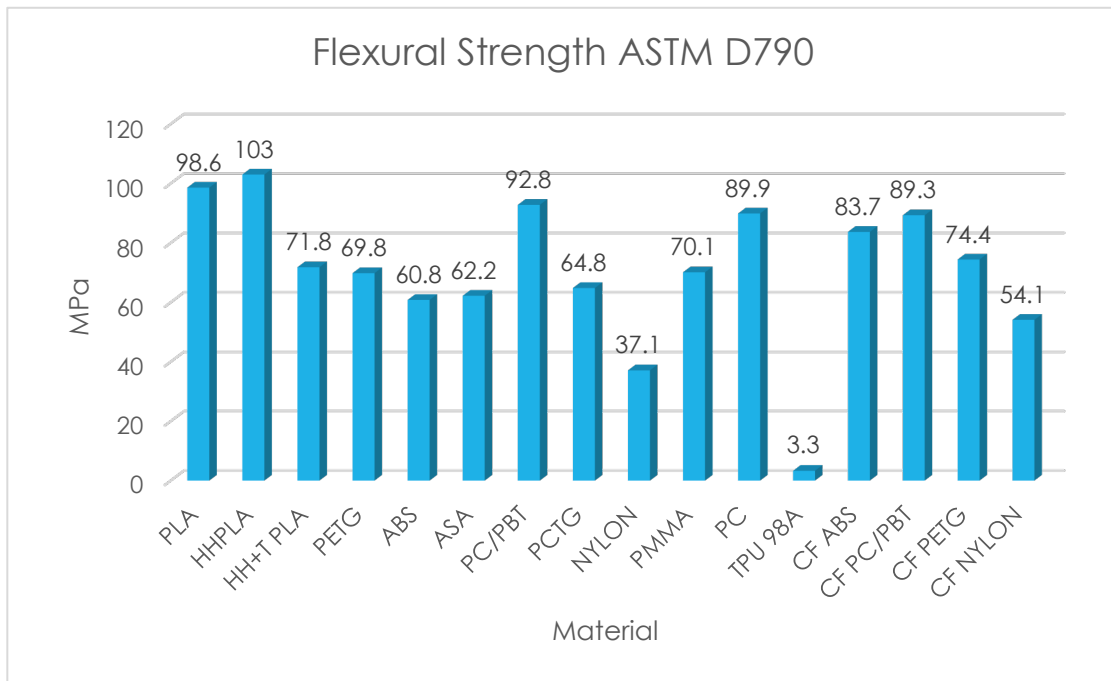
Impact strength: The ability of a material to absorb energy during impact. The 3D printed Test specimen is held as a vertical cantilevered beam and is impacted by a swinging pendulum. The energy lost by the pendulum is equated with the energy absorbed by the test specimen.



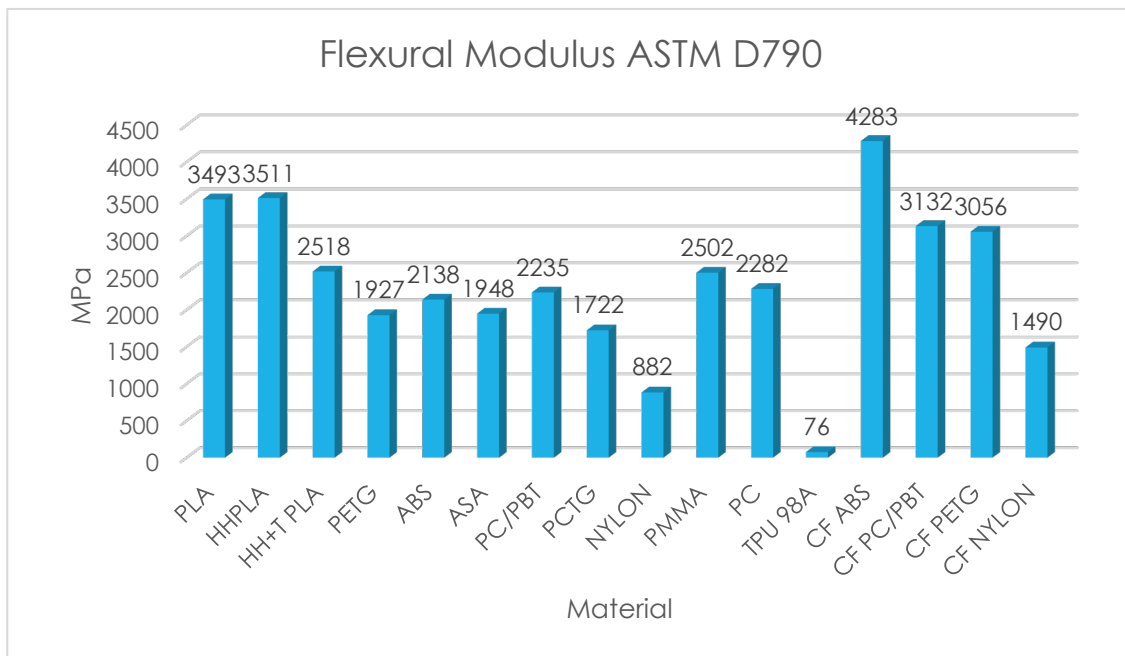
Heat Deflection: The ability of a material to remain rigid under a constant load at elevated temperatures. The 3D printed specimen is supported on either side and a static load applied to the center. The specimen is lowered into an oil bath where the temperature is raised @2°C per minute until the specimens deflect to a specified distance.



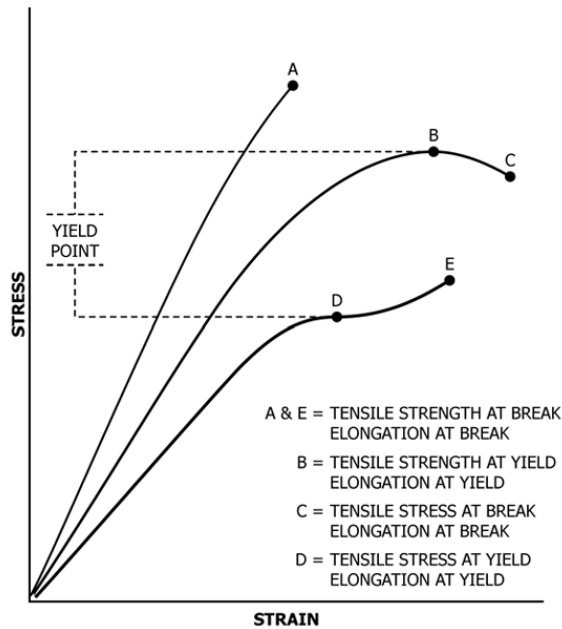
Flexural Strength: A measure of a material's maximum stress it can withstand before failure. A 3D printed specimen is supported from both ends, and a load applied to the middle.



Flexural Modulus: A measure of a material's ability to resist deformation. It is calculated by dividing the applied stress by the total deformation in the material.



Tensile Strength: A measure of the amount of load that a material can withstand when pulled apart in tension before it yields (stretches irreparably) or breaks.

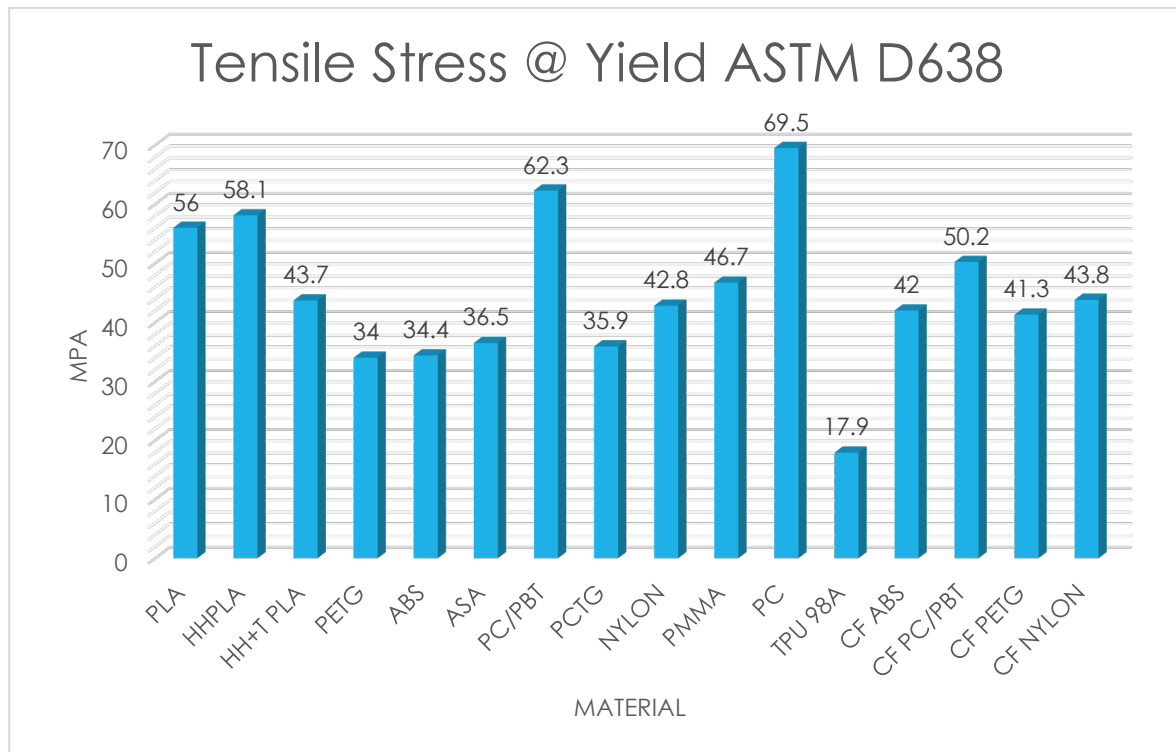


Stress vs Strain

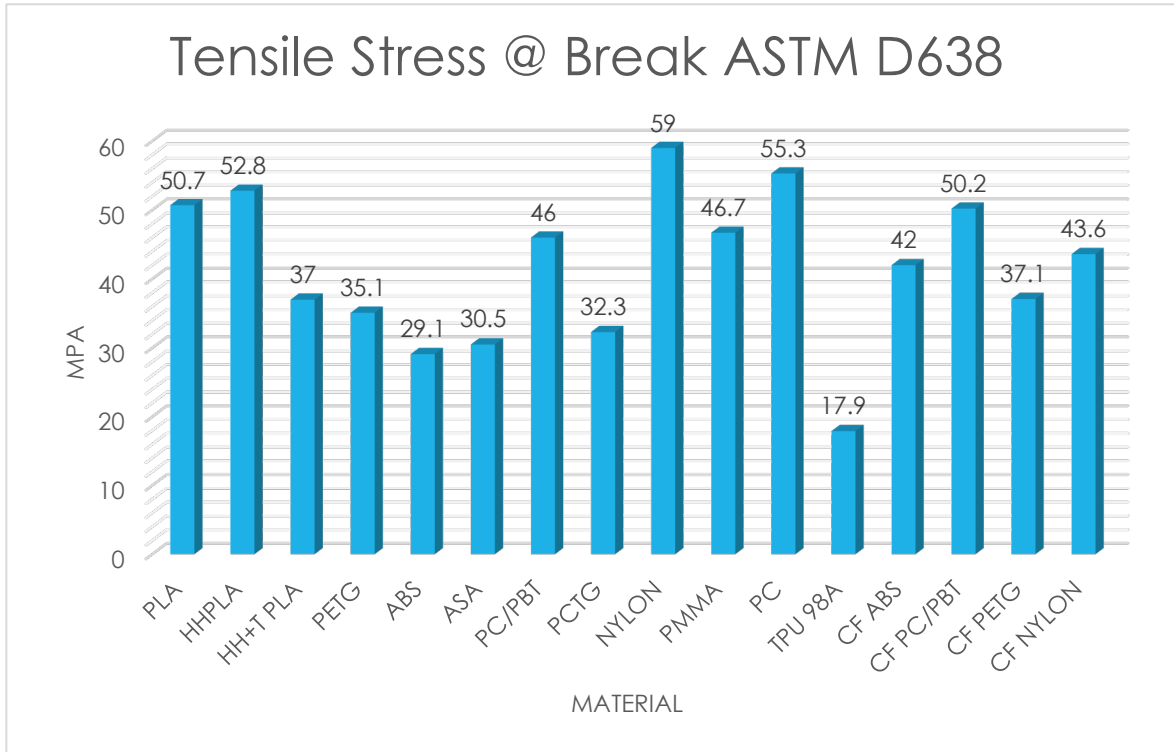
Tensile Stress: The resistance of a material to a force that could tear it apart.

Tensile Strain: The deformation and elongation of a material upon application of a tensile force. It is measured by the ratio of the stretched specimen to un-stretched specimen.

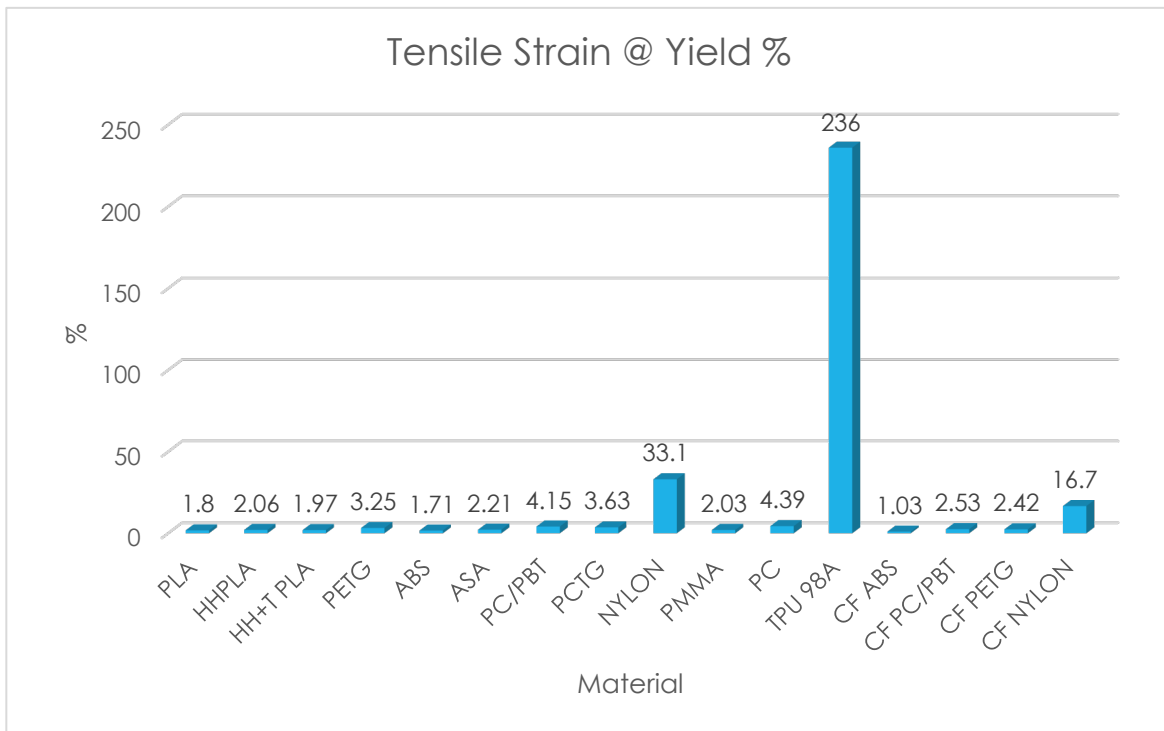
Tensile Stress @ Yield: The maximum stress the material can withstand without permanently deforming.



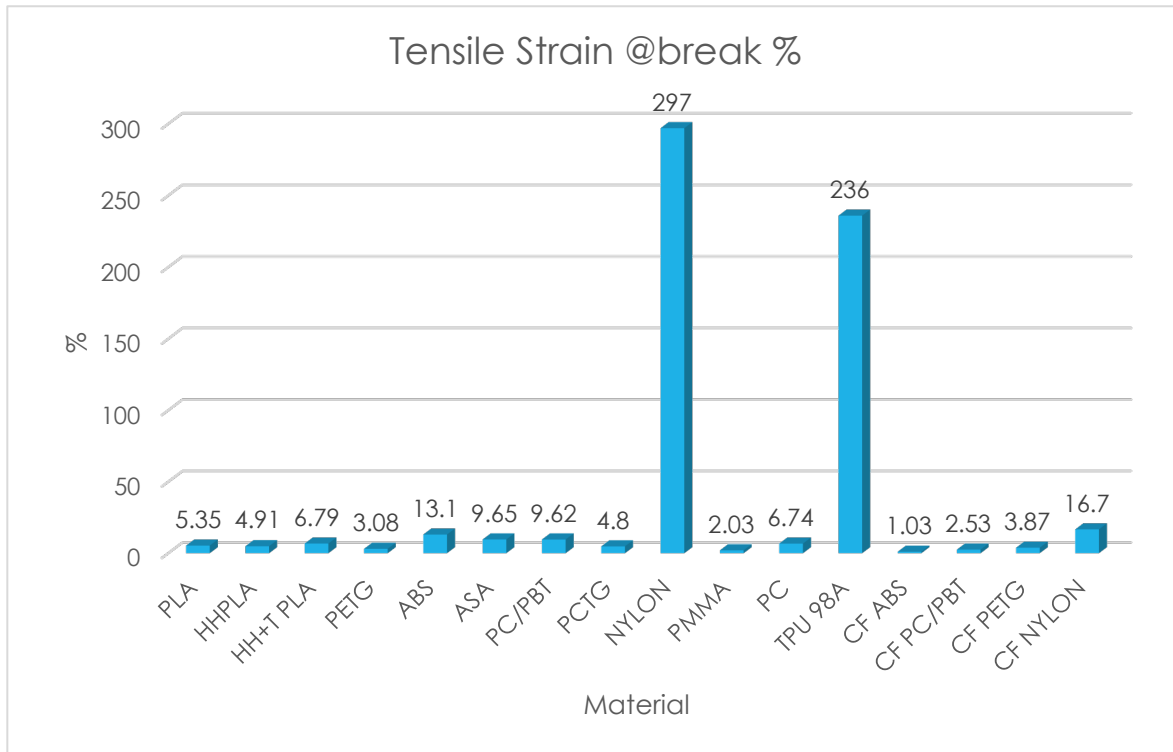
Tensile Stress @ Break: The maximum stress a material can withstand before breaking.



Tensile Strain @ Yield%: The measure of the % elongation of the material when stretched before permanent deformation.



Tensile Strain @ Break %: The measure of the % elongation when stretched to break.



*Testing specimens **3D printed** with a 0.4mm nozzle, 0.2mm layer height, and 100% infill. The specimens were printed flat (XY) on the build plate at the temperatures according to each materials print settings located at www.pushplastic.com/pages/print-settings

www.PushPlastic.com



Disclaimer: The data contained on this datasheet is provided free of charge or obligation. The data is not intended to substitute any testing that maybe required to determine if a material is suitable for a particular application. This data should not be used to establish specifications limits or used alone as the basis of design. Any use of the data is accepted at the recipient's sole risk.