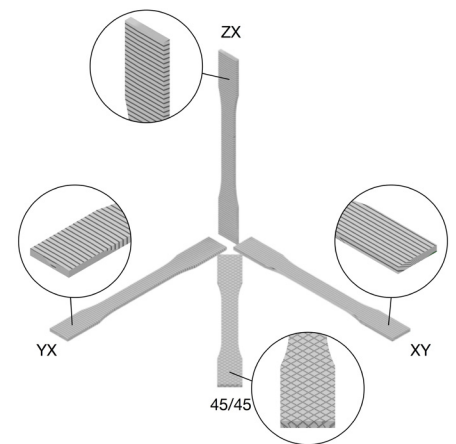


ESSENTIUM COPOLYESTER PCTG

Essentium Copolyester PCTG is a member of the copolyester family, chemically similar to PETG. Our PCTG is an easy-to-use material with incredible surface finish and excellent impact resistance. This robust material can be printed in open air and over a large temperature range. Depending on the temperature you choose, you can give your prints either a glossy finish on the high end or a matte finish on the low end. Compared to PETG, our PCTG has a similar strength and stiffness, while offering superior impact strength and chemical resistance.

| Metric | Test Method | Molded Properties | 3D Printing Properties | | |
|--------------------------|-------------|-------------------|------------------------|------|------|
| | | | XY | YX | ZX |
| Tensile Strength, MPa | ASTM D638 | 55 | 38 | 38 | 27 |
| Tensile Modulus, MPa | ASTM D638 | 1748 | 1670 | 1507 | 1426 |
| Flexural Strength, MPa | ASTM D790 | 68 | 68 | 60 | 53 |
| Flexural Modulus, MPa | ASTM D790 | 1907 | 1692 | 1416 | 1264 |
| Notched Izod Impact, J/m | ASTM D256 | 1350 | 109 | 29 | 25 |

| Metric | Method | Properties |
|----------------------------------|------------|------------|
| Specific Gravity | ASTM D792 | 1.23 |
| Melting Point, °C | ASTM D3418 | 202 |
| Glass Transition Temperature, °C | ASTM D3418 | 76 |
| Heat Deflection Temp., °C | | |
| 0.45 MPa (66 psi) | ASTM D648 | 70 |
| 1.80 MPa (264 psi) | ASTM D648 | 62 |



RECOMMENDED PRINT SETTINGS

| | | | |
|-------------------------|-----------|-------------------------|----------|
| Nozzle Temperature, °C | 250 – 270 | Ex. Multiplier (Flow) | 1 |
| Bed Temperature, °C | 70 – 80 | Fan Speed, % | 25 – 50 |
| Print Speed, mm/s | 40 – 80 | Retraction Speed, mm/s | Standard |
| First Layer Speed, mm/s | 20 – 40 | Retraction Distance, mm | Standard |