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# HTL Resin

HTL is a high performance engineering material with high strength, rigidity, and heat resistance, able to withstand temperatures up to 114°C. HTL enables high resolution features, making it suitable for a broad range of engineering and medical applications including those which require autoclave sterilization.



|                            |                              | Cured Parts  | Standard       |
|----------------------------|------------------------------|--|----------------|
| <b>Tensile Properties</b>  | TENSILE STRENGTH             | 71.5 MPa   | ASTM D638      |
|                            | ELASTIC MODULUS              | 2397 MPa   | ASTM D638      |
|                            | ELONGATION AT BREAK          | 7.8%   | ASTM D638      |
| <b>Flexural Properties</b> | FLEXURAL STRENGTH            | 112.9 MPa  | ASTM D790      |
|                            | FLEXURAL MODULUS             | 2.8 GPa  | ASTM D790      |
| <b>Impact Properties</b>   | IMPACT STRENGTH              | 30 J/m   | ASTM D256      |
| <b>Thermal Properties</b>  | CTE @ 60C                    | 169.0 $\mu\text{m}/\text{m}/^\circ\text{C}$            | -              |
|                            | HDT @ 0.45 MPa               | 114.2 $^\circ\text{C}$                                 | ASTM D648 - 07 |
|                            | TG                           | 172 $^\circ\text{C}$                                   | ASTM D7028     |
| <b>General Properties</b>  | CONTACT ANGLE                | 45-60 $^\circ$   | ASTM D7334     |
|                            | WATER ABSORPTION (24h)       | 1.05%  | ASTM D570      |
|                            | DIALECTIC CONSTANT (10 GHz)  | 3.45   | -              |
|                            | DF                           | 0.0245   | -              |
|                            | HARDNESS                     | 81 Shore D   | ASTM D785      |
|                            | VISCOSITY                    | 85 cP  | -              |
|                            | STANDARD COLOR               | Yellow Translucent / Black / Carbon Black <sup>2</sup> | -              |
| COMPATIBLE BMF SYSTEMS     | S130, S140, S230, S240, S350 | -  |                |

<sup>1</sup> Final properties are dependent on print conditions, post-processing operations, and part geometry.

<sup>2</sup> Test samples were UV cured and heat cured.

<sup>o</sup> Carbon black materials are not available on 2 $\mu\text{m}$  systems