

# ULTEM 1010

## Key Features

Heat resistance • Chemical resistance •  
Biocompatibility • Strength

## Applications

Prototyping • End-use parts • Tooling •  
Aerospace • Automotive • Medicine, dentistry •  
Consumer goods

## Product Description

ULTEM™ 1010 resin is a high-performance polyetherimide (PEI) thermoplastic renowned for its strength in 3D printing. With exceptional heat resistance and the lowest coefficient of thermal expansion among FDM materials, ULTEM 1010 resin is ideal for demanding applications. Its high strength properties make it the strongest FDM material, particularly suitable for specialized uses such as lightweight composite tooling.

## Properties

|  |                        |
|--|------------------------|
| Tensile modulus (XZ, ZX)               | 3,040, 3,000 MPa       |
| Tensile strength at break (XZ, ZX)     | 79.2, 28.2MPa          |
| Elongation at break (XZ, ZX)           | 4.0, 1.1%              |
| Flexural strength at 5% strain (XZ)    | 128 MPa                |
| Flexural modulus (XZ, ZX)              | 2,910, 2,640 MPa       |
| Heat deflection temperature (0.45 MPa) | 216.9°C                |
| Heat deflection temperature (1.80 MPa) | 215.1°C                |
| Glass transition temperature           | 209.4°C                |
| Density                                | 1.29 g/cm <sup>3</sup> |
| Flame retardancy                       | UL 94 V-0              |

## Reference

For more detailed source information, please consult the original document linked [here](#). We encourage users to verify the data's relevance and suitability for their specific needs.

