



## DURALOC MATERIAL DATA SHEET

DURALOC resin offers exceptional hydrolytic stability, and toughness that is superior to other high-temperature engineering resins.

It features high deflection temperatures and outstanding resistance to environmental stress cracking.

The polymer is inherently flame retardant, and also has excellent thermal stability and good electrical properties.

It was chosen as our insert material because it is especially well-suited for parts requiring long flow length with thin walls.

### Product Data

ASTM Typical Values (1) Test U.S. Customary Units SI Units, Property Method Value Units

#### Mechanical

Tensile Strength D 638 10.4 kpsi 70 MPa

Tensile Modulus D 638 340 kpsi 2.1 GPa

Tensile Elongation at yield D 638 7.1% 7.2%

Tensile Elongation at break D 638 60-130%

Flexural Strength (2) D 790 13.8 kpsi 88 MPa

Flexural Modulus D 790 362 kpsi 2.5 GPa

Tensile Impact Strength D 1822 194 ft-lb/in<sup>2</sup> 420 kJ/m<sup>2</sup>

Izod Impact, Notched D 256 13 ft-lb/in 690 J/m

#### Thermal

Deflection Temperature at 264 psi (1.82 MPa) D 648 405 F 207 C

Flammability Rating (3) UL-94 V-0 0.030 in V-0 0.75 mm

Coefficient of Thermal Expansion D 696 31 ppm/ F 56 ppm/ C

Glass Transition Temperature (4) 428 F 220 C

#### Chemical

Steam Sterilization (5) w/ Morpholine, cycles passed without cracking, crazing, or rupture > 1,000 cycles  
> 1,000 cycles

Water Absorption at 24 hours D 570 0.37%

Water Absorption at Equilibrium D 570 1.10%

\*The preceding data gives the typical properties of the selected Duraloc material. These are typical properties and should not be used for specification purposes. This information is based on our experience to date and we believe it to be reliable. It is intended to be used only as a guide at your discretion and risk. Flow Smart cannot guarantee favorable results and assumes no liability in connection with the use of this product. None of this information is to be taken as a license to operate under, or a recommendation to infringe any patents.