

# PROPERTIES OF SPECIAL POLYMERS FOR RADIATION SHIELDING

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## *Properties of Special Polymers for Radiation Shielding*

- *Heat and Cold Resistance:*
  - *Temperature High - 260° C*
  - *Temperature Low – 65° C*
- *Resistance to Oils, Solvents, Lubricant fluids, Ozone and other Chemicals (dilute acids and alkalines)*
- *Radiation Resistance – about 10<sup>7</sup> Gamma ray dose (rads)*
- *Thermal Conductivity – 1.2 W/m.K*
- *Dielectric Constant and Strength – 5.5 and 331 volts/mil respectively*
- *Durometer – 40 Shore A*
- *Elongation Fatigue – 200%*
- *Tear strength – 27 ppi*
- *Tensile strength – 300 psi at 250° C*
- *Volume Resistivity – 2.1 x 10<sup>13</sup> ohms-centimeters*
- *Specific Gravity – 1.4 gm/cc*

*Note: The specialized polymers are loaded with non-lead bearing Gamma-Guard™ and designed for various applications for medical diagnostic and treatment equipments and other facilities*