Hotblox Dielectric 3.0 is a rigid, low loss, moldable dielectric material that is suitable for numerous RF applications, including dielectric lenses, radomes, and filled waveguide applications. This material has a dielectric constant of 3.0 which is similar to that of polystyrene based materials. Hotblox Dielectric 3.0 is ideal for continuous use in environments up to 400 °C, and can be used in conditions as high as 600 °C for short duration exposure. Hotblox Dielectric 3.0 has a CTE similar to that of aluminum, enabling design of components using this material in contact with aluminum parts, providing long service life for RF items operating in a variable temperature environment.

General-
Density (ASTM D792) 1.5 g/cm³
Color White/off white
Continuous Use Temperature 400 °C
( Determined by Thermogravimetric Analysis)
Short Duration Use Temperature 600 °C for 2 min.
( No degradation in Room Temperature Properties)
Water Absorption Testing in progress
(ASTM D570)

Thermal Properties-
Thermal Conductivity 0.75 W/m·K
(Line Source Transient)
Coefficient of Thermal Expansion (CTE) <30 ppm/°C
(ASTM E-831)

Mechanical Properties-
Flexural Strength 31 MPa
(ASTM D790)

Electrical Properties-
Dielectric Constant 3.0
(X-band)
Loss Tangent 0.0016
(X-band)