

DATASHEET: RARE EARTH MATERIALS

PROPERTIES	Units	EREY99	EREH99	EREH97Y	EREC99
		Yttrium Oxide	Hafnium Oxide	Hafnium, Stabilised	Cerium Oxide
Physical Properties					
% Primary Material	% wt	99.9 (Y ₂ O ₃)	99.9 (HfO ₂)	97.5 (HfO ₂)	99.9 (CeO ₂)
% Secondary Material	% wt	-	-	2.5 (CaO or Y ₂ O ₃)	-
Density	g/cm ³	4.95	9	9.5	7.2
Open Porosity	%	<2	<1	<1	<1
Thermal Properties					
Max Operating Temp	°C	2000	2812	1700	1900
Max Operating Temp	°F	3632	5093	3092	3452
Thermal Conductivity (20 - 100oC)	W/m ² K	0.3	-	-	-
Coefficient Thermal Expansion	x10 ⁻⁶ K ⁻¹	8.5-13.7	-	-	-
Mechanical Properties					
Flexural Strength	psi	-	-	-	-
Hardness- Mohs	Mohs	-	-	-	-
Tensile Strength	psi	-	-	-	-
Electrical Properties					
Volume Resistivity at 20°C	ohm - cm	-	-	-	-
Volume Resistivity at 600°C	ohm - cm	-	-	-	-
Dielectric Constant	25°C & 1 mhz	-	-	-	-

** - Full Chemical Analysis Available On Request

Additional material properties are available - please ask at enquiries@earthwaterfire.com

These values were established on test pieces and identify the characteristic data of our products. Transferring of these values into practice depends on individual geometry and application of each part.

For Further Information contact us at: enquiries@earthwaterfire.com