



Henson Ceramics Limited

Unit 2, Brindley Close, Tollgate Industrial Estate, Stafford, Staffordshire, ST16 3SU

HCL2000 SERIES - GLASS CERAMIC - DATA SHEET

PROPERTIES		UNITS	TEMPERATURE	HCL2087	HCL2088	HCL2089	HCL2090	HCL2091
Mechanical	Brand Name	-	-	-	-	-	Zemat	Mexim C
	Composition	-	-	Li ₂ O-Al ₂ O ₃ -SiO ₂	ZnO-Al ₂ O ₃ -SiO ₃	Mg ₂ Al ₄ Si ₅ O ₁₈	Li ₂ O-Al ₂ O ₃ -SiO ₂	Li ₂ O-Al ₂ O ₃ -SiO ₂
	Colour	-	20°C	White	White	White	Transparent	White
	Open Porosity	vol %	-	-	-	-	-	-
	Density	gcm ³	20°C	2.4	3.1	1.8	3.1	3.14
	Cross Breaking Strength	MPa	20°C	350	170	60	280	250
	Compressive Strength	MPa	20°C	1800	1250	1000	1600	1400
	Youngs Modulus	GPa	20°C	83	84	40	84	81
	Hardness	Rockwell 45N	20°C	75	60	50	70	65
Thermal	Coefficient of Linear Expansion	10 ⁻⁶ °C ⁻¹	20 100 °C	9.3	-	-	0.5	-
		10 ⁻⁶ °C ⁻¹	20 520 °C	-	4.7	1.6	-	-
		10 ⁻⁶ °C ⁻¹	20 700 °C	-	-	-	-	17.7
		10 ⁻⁶ °C ⁻¹	20 800 °C	11.7	-	1.6	-	-
	Expansion Match			17% Chrome Iron	Molybdenum			Copper
	Thermal Conductivity	Wm ⁻¹ K ⁻¹	20°C	1.8	3.2	2.0	1.2	1.5
	Softening Temperature	°C	-	650	680	1100	710	720
	Refractive Index		-	-	-	-	1.5	-
	Thermal Shock Resistance	ΔT°C	-	100.0	150.0	500.0	650	70
Electrical	Instantaneous Dielectric Strength	MVm ⁻¹	20°C	46	46	-	35	28
	Volume Resistivity	Ωm	20°C	3 x 10 ¹⁶	1 x 10 ¹⁴	1 x 10 ¹³	3 x 10 ¹⁶	2 x 10 ¹⁷
	Permittivity							
	(10MHz)		20°C	6.1	-	-	-	5.8
	(1GHz)		20°C	5.5	-	-	-	5.8
	(10GHz)		20°C	5.1	-	-	-	6.2
	Power Factor							
	(10MHz)		20°C	4.0 x 10 ⁻³	-	-	-	-
	(1GHz)		20°C	1.9 x 10 ⁻³	-	-	-	-
	(10GHz)		20°C	5.6 x 10 ⁻³	-	-	-	-