

TECHNICAL CHARACTERISTICS OF THE MAIN CERAMIC PRODUCTS PRODUCED BY ENGE CER

PROPERTY	CEH 5020	CEH 5040	CEH 5059	CEH 5080	CEH 6640	CEH 6645
Main Chemical Composition	Al ₂ O ₃ > 99,0% MgO < 0,8%	Al ₂ O ₃ > 95,0% SiO ₂ < 3,5%	Al ₂ O ₃ > 94,0% Cr ₂ O ₃ < 1,5%	Al ₂ O ₃ > 68,0% ZrO ₂ > 20%	ZrO ₂ > 95,0% MgO < 4,0%	ZrO ₂ > 94,0% Y ₂ O ₃ < 6,0%
Predominant Color	White	White	Light Pink	Ivory	Yellow/White	White
Medium Primary Grain Size (D₅₀)	0,7 a 0,9 μm	2,3 a 2,9 μm	2,0 a 2,9 μm	0,8 a 1,2 μm	0,5 a 1,0 μm	0,5 a 1,0 μm
Density (g/cm³)	3,80 a 3,90	3,60 a 3,75	3,70 a 3,80	3,95 a 4,20	5,60 a 5,75	5,70 a 5,90
Apparent Porosity	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Thermal Conductivity (20°C)	35 W/m.K	24 W/m.K	16 W/m.K	23 W/m.K	2 W/m.K	2 W/m.K
Linear Thermal Expansion Coefficient (25 a 1000°C)	8,3 x 10 ⁻⁶ /°C	8,2 x 10 ⁻⁶ /°C	8,1 x 10 ⁻⁶ /°C	8,1 x 10 ⁻⁶ /°C	10,0 x 10 ⁻⁶ /°C	10,4 x 10 ⁻⁶ /°C
Maximum Recommended Use Temperature	1500°C	1100°C	1400°C	1600°C	1000°C	1200°C
Resistance to Acid Attack	excellent	excellent	regular	good	good	regular
Resistance to Alkaline Attack	good	good	good	good	excellent	good
Rockwell Hardness (Load: 45N)	78	70	68	82	76	83
Compressive Strength (25°C)	2600 MPa	2000 MPa	2400 MPa	2400 MPa	1700 MPa	> 2000 MPa
Flexural Strength (25°C)	350 MPa	300 MPa	300 MPa	400 a 700 MPa	500 MPa	900 MPa
Resistivity (1000°C)	10 ⁷ Ω.m	10 ⁷ Ω.m	10 ⁴ Ω.m	-	-	-
Dielectric Strength	20 kV/mm	20 kV/mm	14 kV/mm	-	2 - 10 kV/mm	-
Dielectric Constant (1 GHz)	8,2	8,2	9,0	-	-	-

REFERENCES

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