PPC INSULATORS

ELECTRIFYING THE WORLD

PPC Insulators

Precipitator Insulators

Precipitator insulators for demanding DC applications at the highest temperatures

www.ppcinsulators.com

PPC Precipitator Insulators

Resistivity for High Temperature Applications

PPC precipitator insulators are made from LD ceramic, aproprietary material developed by PPC in the early 1970's. Since then, PPC has delivered LD solutions to major OEM's across the globe.

LD is a high grade ceramic material and it's composition differs significantly from traditional HV porcelain compositions.The material is developed specifically to withstand Direct Current at elevated temperatures in severe operating conditions.

The LD material is sintered to a density degree of 95% with no open porosity that would allow water penetration.

The glaze of LD insulators provides the products with a combined dirt and dust repelling surface.The glazed surface will help avoid tracking and discharges along the insulator surface and facilitate inspection, cleaning etc.The glaze used for the LD products has the same high resistivity as the material.

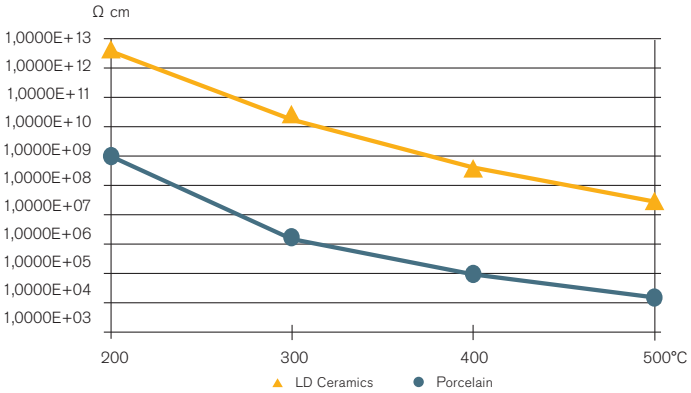
Benefits of LD Ceramic

- High resistivity at elevated temperatures reduces the risk of electrical breakdown due to excessive leakage currents.
- The glazed surface of LD ceramic gives the material a dirt and dust repelling property, significantly reducing the probability of tracking across the material. This surface also facilitates inspection and cleaning, reducing maintenance costs.
- Excellent mechanical strength and impact resistance, significantly reducing failure due to mechanical stress.
- LD Ceramics show a lower decrease of resistivity due to the reduced build-up of conductive surface contaminants in comparison with unglazed insulators.
- Low thermal expansion allows the insulator to resist cracking in case of thermal shock.

LD Ceramic Properties

FLEXURAL STRENGTH - Glazed, MPa (psi)	160	(23200)
FLEXURAL STRENGTH - Unglazed, MPa (psi)	140	(20300)
COMPRESSION STRENGTH - Glazed, MPa (psi)	650	(94250)
COMPRESSION STRENGTH - Unglazed, MPa (psi)	650	(94250)
OPEN POROSITY	Nil	
DENSITY, kg/m^3 (lb/ft^3)	2.6	(0,062)
MODULUS OF ELASTICITY, GPa (ksi)	100	(14503)
COEFFICIENT OF LINEAR THERMAL EXPANSION @ 20-600°C , K^{-1} x 10^{-6} (°F^{-1} x 10^{-6})	5.3-5.5	(2.94-3.06)
THERMAL CONDUCTIVITY @ 20-100°C	2	(13.87)
THERMAL SHOCK RESISTANCE, K (°F)	150	(270)
DIELECTRIC STRENGTH, kV/mm (kV/in)	20	(508)
VOLUME RESISTIVITY at 100°C, ohm-cm (ohm-in)	10^{14}	(10^{13})
VOLUME RESISTIVITY at 200°C, ohm-cm (ohm-in)	10^{12}	(10^{11})
VOLUME RESISTIVITY at 400°C, ohm-cm (ohm-in)	10^{8}	(10^{7})
VOLUME RESISTIVITY at 500°C, ohm-cm (ohm-in)	10^{7}	(10^{6})

Volume resistivity vs. temperature



Learn More

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