



PPC Insulators

Precipitator Insulators

Precipitator insulators for demanding DC applications
at the highest temperatures

PPC Precipitator Insulators

Superb Resistivity for High Temperature Applications



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

LD is a high grade ceramic material and its 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.

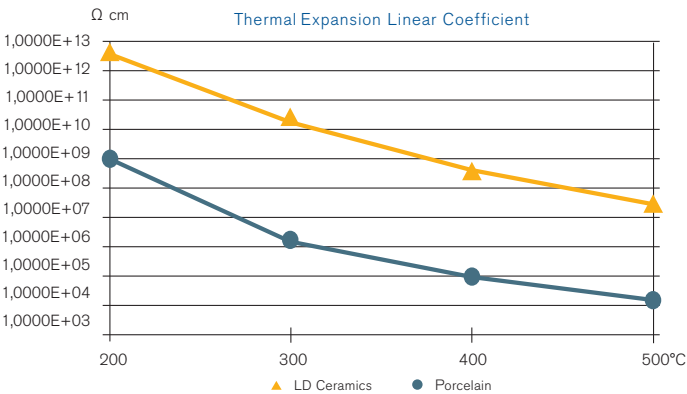
Benefits of LD Ceramic

- 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.

Key data

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| FLEXURAL STRENGTH for unglazed material | 140 MPa |
| FLEXURAL STRENGTH for glazed material | 160 MPa |
| COMPRESSION STRENGTH for unglazed material | 650 MPa |
| COMPRESSION STRENGTH for glazed material | 650 MPa |
| OPEN POROSITY | nil |
| DENSITY | 2,6 kg/m ³ |
| MODULUS OF ELASTICITY | 100 GPa |
| LINEAR THERMAL EXPANSION in temperature range 20-600°C | 5.3 - 5.5 K ⁻¹ x 10 ⁻⁶ |
| THERMAL CONDUCTIVITY 20-100°C | 2.0 w/m ² K |
| TEMPERATURE SHOCK RESISTANCE | 180 - 200 °K |
| DIELECTRIC STRENGTH | 40 kV/mm |
| VOLUME RESISTIVITY at temperature 20°C | >10 ¹⁸ Ωcm |
| VOLUME RESISTIVITY at temperature 200°C | 10 ¹¹ Ωcm |
| VOLUME RESISTIVITY at temperature 400°C | 10 ⁸ Ωcm |

Volume resistivity vs. temperature



Learn More

For more information please contact your local sales representative or contact PPC at:

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