

KLINGERSIL® DIELECTRIC STRENGTH

Insulating Properties

In relation to gasketing applications, a material acts as an insulator or barrier to the flow of electrons from one flange to another.

The dielectric strength is the maximum voltage that can be applied to one face of the gasket, before electrical current begins to flow through the gasket and into the opposing flange due to the failure of the gasket's insulating properties. At this breakdown voltage, the electric field frees bound electrons, turning the material into a conductor. The voltage at which breakdown is dependent on the thickness of the dielectric insulator (gasket) and the electrodes with which the electric field is applied, as well as the rate of increase at which the electric field is applied. Dielectric strength is usually expressed as a voltage gradient (such as volts per mm).



Dielectric Strength Rankings Per ASTM D149

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