

TELBEX Rigid PVC Sheet

Electrical Properties

Telbex rigid PVC sheet is a good electrical insulator, having a high apparent volume resistivity and dielectric strength. Its use at very high voltages, however, requires caution because under certain conditions of exposure to high voltage sparks, conducting carbon tracks may be formed.

It should be noted that the electrical properties of unplasticised PVC in both a.c. and d.c. conditions depends on temperature and time. In addition, the presence of fillers and absorbed water will affect properties and therefore the figures quoted below should be used as a guideline rather than an absolute in terms of design work.

Electrical Properties of Un-pigmented Telbex Rigid PVC Sheet at 20°C

Electrical property	Method	Units	Value
Volume resistivity	BS2782:1983 Method 230A	ohm/cm	10 ¹⁵
Surface resistivity	BS2782:1983 Method 231A	ohm	10 ¹⁴
Dielectric strength	BS2782:1983 Method 220 and 221	kV/mm	14
Dielectric constant (10 ⁶ C/sec)			3.1

Volume Resistivity: The terminology "apparent volume resistivity" is preferred because of the strong dependence of the measured values on the time of polarisation.

Dielectric Strength: Evaluated using a 3.0mm thick sample, immersed in transformer oil at 20°C.

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