

Thermal Resistivities of Materials

Material	Thermal Resistivity (ρ_T) Km/W
Insulating Materials*	
Paper insulation in solid type cables	6.0
Paper insulation in oil-filled cables	5.0
Paper insulation in cables with external gas pressure	5.5
Paper insulation in cables with internal gas pressure	
A) Pre-impregnated	5.5
B) Mass-impregnated	6.0
PE	3.5
XLPE	3.5
PPL	5.5
Polyvinyl chloride	
Up to and including 3kV cables	5.0
Greater than 3kV cables	6.0
EPR	
Up to and including 3kV cables	3.5
Greater than 3kV cables	5.0
Butyl rubber	5.0
Rubber	5.0
Protective Coverings	
Compounded jute and fibrous materials	6.0
Rubber sandwich protection	6.0
Polychloroprene	
PVC	
Up to and including 35kV cables	5.0
Greater than 35kV cables	6.0
PVC/Bitumen on corrugated aluminum sheaths	6.0
PE	3.5
Materials for Duct Installations	
Concrete	1.0
Fibre	4.8
Earthenware	1.2
PVC	6.0
PE	3.5

*For the purposes of current rating calculations, the semiconducting screening materials are assumed to have the same thermal properties as the adjacent dielectric materials. Where plastic or elastomeric materials are used for protective coverings, the thermal resistivities shall be taken to be the same as those for the insulation grades of the materials given in this table.

