



Years of Excellence



EXCELERTHINGS[®]
Safest Platform for Electrical Earthing...

Be Safe With Excel Earthings

Tested & Certified by



Our Associates



SIEMENS



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KERALA | KARNATAKA | TAMILNADU | MAHARASHTRA | CHATTISGARH



OUR PRODUCTS

Earth Enhancing Compounds

Excel Earthing Compound

- ❖ Improves the Conductivity of Soil
- ❖ Excellent Moisture Absorption and retaining capacity
- ❖ Enriches the Charge Carrying Ions in the soil
- ❖ Non-Corrosive to Earth Electrodes
- ❖ IEC 62561-7:2018 Tested and Certified (TC No: MBT/TC/2020K10004)
- ❖ Eco-Friendly- RoHS (TC No: IND/BLR/CH/2013/04621), TCLP (TC No: KEIL/QA/CS/011) Tested and Certified



Electrafill

- ❖ Electronically Conductive Minerals
- ❖ Preferred in areas where hard Rock, or where the soil Resistivity is high
- ❖ Non-Corrosive to Copper/Copper Bonded Earth Electrodes
- ❖ Minimal Seasonal Variation
- ❖ Eco-Friendly- RoHS (TC No: (8714)337-0050), TCLP (TC No: CGR0000898925) Tested and Certified



Conductive Concrete

- ❖ Excel Conductive Concrete is a Mixture of highly conductive Carbon Granules
- ❖ It increases the surface area of the earth electrode when mixed with cement
- ❖ Exceptionally Low Resistive Material ($<0.096 \text{ ohm-m}$)
- ❖ Non-Corrosive to steel or copper
- ❖ Maintenance Free- Provides Permanent Earthing Solution.
- ❖ No effect of Seasonal Variations
- ❖ Eco-friendly
- ❖ IEC 62561-7:2018 Tested and Certified (TC No: MBT/TC/2020K10004)
- ❖ Excellent Solution for Electrical Earthing



Specialities of our Copper Bonded Earth Electrode

Tinned Terminal: ←

- To prevent bi-metallic corrosion

Nickel Sealing: ←

- To get good adhesion with copper
- To increase the life of electrode

Copper: →

- 99.95% Pure Electrolytic Grade Mitsubishi Copper

Pressed Contact: →

- To get more Surface area of contact

SAE 1018 Grade Low Carbon Steel

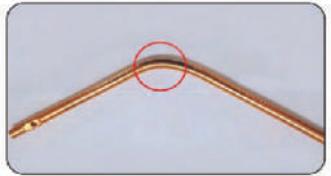
Internal Quality Test as per UL 467



Coating Thickness Test
Clause 9.6.1 (UL 467).



Adhesion Test
Clause 9.7.1 (UL 467)



Bend Test
Clause 9.7.2 (UL 467)

Copper Bonded Rods

99.95% Pure Electrolytic Grade Copper is Molecularly bonded to Nickel-Sealed Low Carbon Steel Core having high tensile strength. Nickel Sealing is done for good adhesion and copper coating will not crack when bent or driven. No part of steel is exposed since copper coating is done after all fabrication.



Diameter (mm)	Length Available (m)
14.2, 16, 17.2, 20, 25, 32, 40	1.2 to 3.0
Standard Coating Thickness:- 250/100 Microns	



Advantages of Copper Bonded Rods



- ◆ Superior Electrical, Mechanical and Thermal Properties (IEEE 837)
- ◆ Fast Dissipation of Fault Current
- ◆ No joints beneath the soil as in Plate Electrodes
- ◆ Good Corrosion Resistance than Cast Iron/ Hot Dip GI Electrodes



Certifications

1. IEC 62561-2:2018 (TC No.:C2/0000032498)

- ◆ Adhesion Test
- ◆ Bend Test
- ◆ Electrical Resistivity Test
- ◆ Tensile Strength
- ◆ Yield/Tensile Ratio
- ◆ Coating Thickness Test

2. IS 1772 (1973): (TC No: C2/0000030792)

- ◆ Thickness of Copper Coating
- ◆ Corrosion Resistance Test (CASS)
- ◆ Adhesion Test

3. Short Circuit Current - CPRI Bangalore (TC No: SC15357B, SC15357A)

4. ASTM B499: (TC No: ML/23835/4/20-21)

*NB: Customised Products are also available at Customer Request.
For more information, Please Contact us.*



Extendable Copper Bonded Rods

Deeply driven rods are preferred where the soil resistivity decreases with depth. These rods help to reach stable ground, such that the value of the electrode resistance remains stable even if the top layers of the ground dry out. Our Extendable Copper Bonded Rods having internal Thread are designed in such a way that, driving of rods to greater depth are made very easy.



Diameter	Customized Length
17.2mm to 40mm	4mtr, 5mtr, 6mtr, 9mtr & above
Standard Coating Thickness: 250 Microns	



- ◆ Tapered mating area minimises chipping of thread during driving
- ◆ Stronger threads - BSW standard
- ◆ No effect in joints due to thermal expansion

7nos of Cast Iron Plate 1.2m x 1.2m x 12.5mm for a fault current of 7.87kA in 100ohm-m soil resistivity can be reduced to 5Nos of Extendable Copper Bonded Rod 40mm dia 6mtr Long/ 7Nos of 32mm dia 6mtr Long. Extendable Copper Bonded Rods are used for Transformer Neutral and Body Earthing reducing the overall cost and area required for installation in a more efficient manner.

Copper Bonded Plates

Copper Bonded plates economically replaces copper plate and is superior to Galvanized Iron Plate with its inherent advantages due to the combination of steel and copper. The Copper Coating provides good resistance against corrosion, quick discharge of fault current and is durable. 99.95% Pure Electrolytic grade copper is molecularly bonded to superior quality Nickel Sealed Mild Steel. No part of steel is exposed since Copper Electroplating is done after all fabrication

Size (ft)	Thickness (mm)
2' x 2'	3mm/6mm

Copper Bonded Plates with Welded strip provides intact connection with plate Electrode beneath the soil, eliminating the chances of loose contact.



Copper Bonded Pipes

Copper Bonded pressed pipe is extensively used in highly corrosive soil environment where other Earth Electrodes made of Copper, Hot Dip Galvanized pipe cannot be used due to economical constraints and corrosive nature respectively. Anti-corrosive moisture absorbing minerals is filled and sealed inside copper bonded pipe to eliminate inside out corrosion.



Diameter (mm)	Length Available (m)
42, 48, 75, 96	2.0 to 3.0

- ◆ 99.95% Electrolytical grade copper
- ◆ Standard coating Thickness: 100/250microns



Short Circuit Current Tested and Certified (TC No: CPRIBLRSCLMISC1819T0090) from Central Power Research Institute Bangalore (NABL Accredited Laboratory)



Copper Bonded Strip

Copper Bonded Strips are mainly used for Earthing and Lightning Protection applications, which includes Earthing Conductor, Lightning Down Conductor, Lightning Mesh formation etc. The combination of steel and copper Provides a Cost-effective solution substituting pure copper. They are available in standard Coating Thickness of 100/250microns

Strip Dimension	Max. Length Available
25x3mm, 32x3mm, 25x4mm, 25x6mm, 40x5mm, 50x6mm, 75x6mm	2.5 to 3.0 mtr



Thickness of Copper Coating is tested and certified (TC No: ML/23835/1/20-21, ML/23835/2/20-21, ML/23835/3/20-21) as per ASTM B499 from an NABL Accredited Laboratory

Hot Dip Galvanized Steel Strip

Hot Dip Galvanized Steel strips are manufactured in different dimension with an average Zinc coating of 70microns for Earthing and Lightning Protection Applications.

Strip Dimension	Max. Length Available
25x3mm, 25x6mm, 32x6mm, 50x6mm,	5.5 to 10.0 mtr



25x3mm strips are also available in Coil form for ease of Transportation.

Thickness of Coating is Tested and Certified (TC No: ML/20851/1/20-21) as per ASTM B499 from an NABL Accredited Laboratory

Accessories as per IS/IEC 62305 series



Holder for Insulated Aluminium Conductor



Holder for Bare Aluminium Conductor/25x3mm Strip



Stainless Steel Cross Connector Rod to Rod



Stainless Steel Cross Connector Rod to Strip



Stainless Steel Cross Connector Strip to Strip



Lightning Arrester Extender

*NB: Customised Products are also available at Customer Request.
For more information, Please Contact us.*

Vertical Air Termination Rods/ Lightning Arresters



Vertical Air terminals, also known as Franklin Rods Confirming to IS/IEC 62305-3 are designed to protect structures, exposed equipment's (Solar PV System, Towers etc) from Direct Lightning Strike. They are made-up of Copper Bonded/Stainless Steel Solid Rods. For getting better contact with the down/interconnecting conductors, Pressed Terminals are provided. It Comes with Nylon Insulated Base which provide proper Insulation and separation with the supporting structure.

Sl No	Model	No of Spike	Dia of Rod
1.	Copper Bonded Single spike LA	1	16mm
2.	Copper Bonded Multi Spike LA	4	20mm
3.	Stainless Steel Multispike LA	4	18mm



50Sq.mm Aluminium Conductor

Lightning protection conductors made of Electrical Grade Aluminium with Cross sectional Area 50Sq.mm Confirming to IS/IEC 62305-3 and IEC 62561-2 are designed to handle the electrical current flow due to lightning strike. Insulated Down conductors are also available, where separation distance, flashover is a concern and to minimise the risk of Touch Voltage.



Bare Conductor



Insulated Conductor

Earth Bench/ Terminal Strip

Earth Bench/ Terminal Strip provide a convenient common earthing point for electrical installations and Lightning Protection applications. It also acts as equipotential Bonding Bars, which is used to equalise the potential difference between extraneous conductive parts and exposed Conductive parts. They are made of Stainless Steel with disconnecting facility for testing purposes. Nylon Insulated Strip Holders are also provided for better insulation against surface of contact.

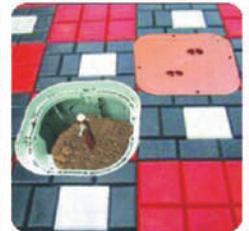
Available Sizes:

4, 6, 8, 12 & 16 Holes



Earth Pit / Inspection Chambers

Earth Pit/ inspection Chambers are provided over earthing top to safely enclose the Earthing System, for carrying out maintenance, inspection and Testing Purpose. In order to avoid masonry work at site, Excel Earthings provide ready-made earth pit chambers with removable lid made of high-density, UV Resistant Polypropylene/ Poly Vinyl Chloride Confirming to IEC 62561-5. They are designed in such a way to minimises the effect due to ageing, crack while installed in soil.



Available Sizes

Item Code	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
EPC 18 X 18	180	180	240	240	210
EPC 24 X 24	240	240	310	310	230
EPC 30 X 30	300	300	400	400	280



Compression Test/Weight Holding Capacity is Tested and Certified (TC No: 20439,19553) from CIPET Kochi (NABL Accredited Laboratory)