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## What is EARTHING

The process of transferring the immediate discharge of the electrical energy directly to the earth by the help of the low resistance wire is known as the electrical earthing. The electrical earthing is done by connecting the non-current carrying part of the equipment or neutral of supply system to the ground. Mostly, the galvanised iron is used for the earthing. The earthing provides the simple path to the leakage current. The shortcircuit current of the equipment passes to the earth which has zero potential. Thus, protects the system and equipment from damage.

## Importance of EARTHING

The earthing is essential because of the following reasons

- ⚡ The earthing protects the personnel from the shortcircuit current.
- ⚡ The earthing provides the easiest path to the flow of short-circuit current even after the failure of the insulation.
- ⚡ The earthing protects the apparatus and personnel from the high voltage surges and lightning discharge.

Earthelectro Earthing Power Solutions is an ISO 9001: 2015 certified organization and are one of the eminent manufacturers and suppliers of Advanced Earthing Solutions, Lightning Protection Systems & Surge Protection Devices. These products have surpassed our competitors and earned repute in the market owing to their quality and high reliability features. We are also engaged in offering lightening risk assessment, surveys, installation and maintenance services.



## Product Code -EEP- GI-01

### 1-GI EARTHING ELECTRODE (PIPE IN STRIP)

Model	Length Mtr	Terminal Size	Inner Strip	Outer Pipe Diameter (min) mm
48 EEPG	1,2&3	40X6	25X3	48
58 EEPG	1,2&3	50X6	25X3	58
88 EEPG	1,2&3	50X6	25X3	88

Hot Dip galvanized for corrosion protection. ⚡

Designed for fast fault current dissipation. ⚡

Low maintenance on site. ⚡

Easy fast installation on site. ⚡

Most suitable for soil condition with ⚡

pH value 5.0 &8.0. ⚡

Moisture booster chemical bags provided ⚡

for low earth resistance. ⚡

## Product Code - EEP-CT-02

### 2- COPPER TERMINAL EARTHING ELECTRODE

⚡ Hot Dip galvanized for corrosion protection.

⚡ Designed for fast fault current dissipation.

⚡ Low maintenance on site.

⚡ Easy fast installation on site.

⚡ Most suitable for soil condition with  
pH value 5.0 &8.0.

⚡ Moisture booster chemical bags provided  
for low earth resistance.

Model	Length Mtr	Terminal Size	Inner Strip	Outer Pipe
48 EEPG	1,2&3	40X6	25X3	48
58 EEPG	1,2&3	50X6	25X3	58
88 EEPG	1,2&3	50X6	25X3	88

## Product Code- EEP-PC-03

### 3-PURE COPPER EARTHING ELECTRODE

Model	Length Mtr	Terminal Size	Inner Strip	Outer Pipe Diameter (min) mm
48 EEPPC	1,2&3	40X6	25X3	48
58 EEPPC	1,2&3	50X6	25X3	58
88 EEPPC	1,2&3	50X6	25X3	88

Used 100% copper for long Life ⚡

Designed for fast fault current dissipation. ⚡

Low Maintenance on site. ⚡

Easy Fast installation on site. ⚡

Most suitable for soil condition with ⚡

pH value 5.0 & 8.0. ⚡

Moisture booster chemical bags provided ⚡

for low earth resistance. ⚡

## Product Code - EEP-CB-04

### 4-Copper Bonded Earthing Electrode

⚡ Long Life

⚡ Enhance Conductivity.

⚡ Tested from NABL & CPRI lab

⚡ Capacity of our earth soil electrode having pH value 5.0 & 8.0.

Model	Length Mtr	Terminal Size	Inner Strip	Outer Pipe Diameter (min) mm
48 EEPCB	1,2&3	40X6	25X3	48
58 EEPCB	1,2&3	50X6	25X3	58
88 EEPCB	1,2&3	50X6	25X3	88

## Product Code- EEPGR 009

5- COPPER BONDED ROD

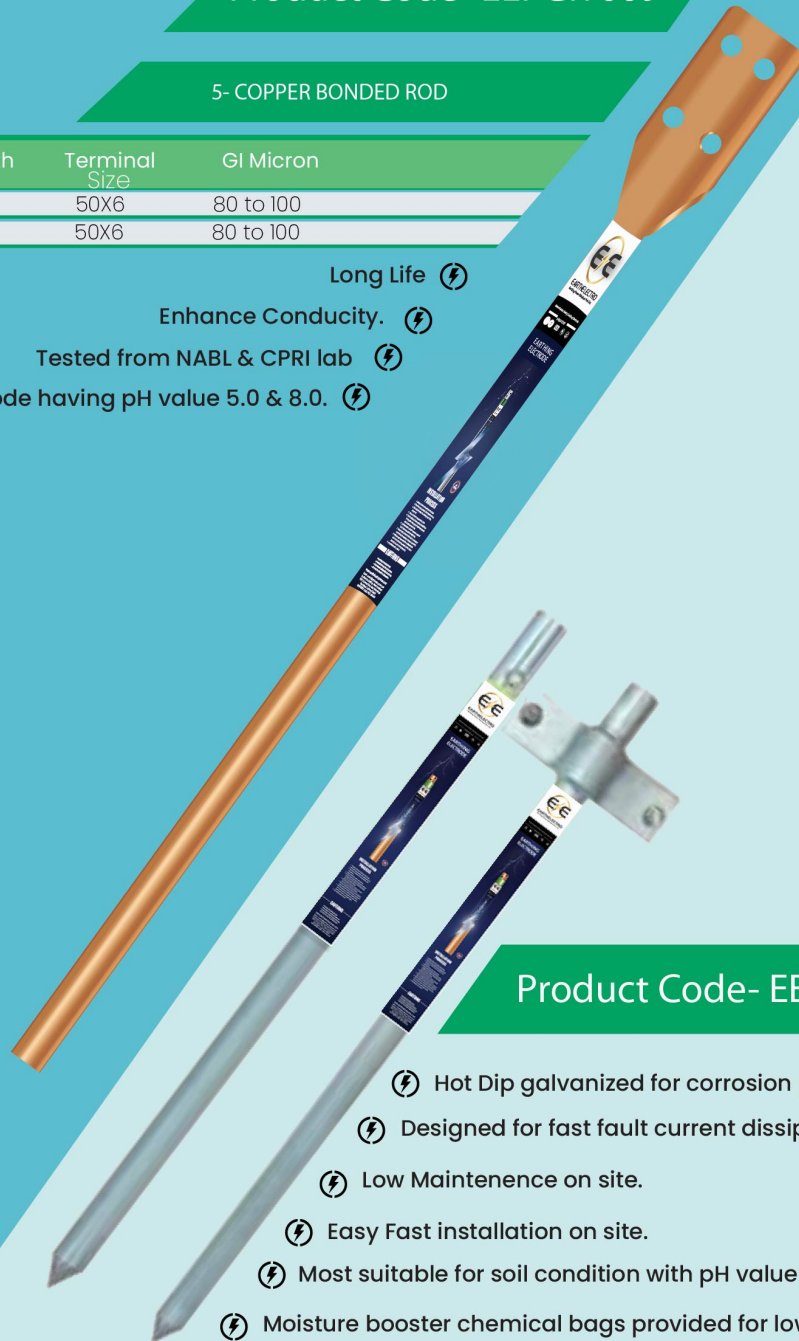
Model	Length Mtr	Terminal Size	GI Micron
17.2 EEPGR	1,2&3	50X6	80 to 100
19 EEPGR	1,2&3	50X6	80 to 100

Long Life ⚡

Enhance Conductivity. ⚡

Tested from NABL & CPRI lab ⚡

Capacity of our earth soil electrode having pH value 5.0 & 8.0. ⚡



## Product Code- EEP -PIP-E-06

- ⚡ Hot Dip galvanized for corrosion protection.
- ⚡ Designed for fast fault current dissipation.
- ⚡ Low Maintenance on site.
- ⚡ Easy Fast installation on site.
- ⚡ Most suitable for soil condition with pH value 5.0 & 8.0.
- ⚡ Moisture booster chemical bags provided for low earth resistance.

Product Code - EEP-PC-07

6-EARTHING PIT COVER

#### Specifications

At Top	:	10 inches (254mm)
At Bottom	:	13 inches (330mm)
Height	:	10.25 inches (260mm)

Factory built hotels for accessing strip/ wire easily at two side ⚡

Made of heavy duty polyethylene for extra durability ⚡

Resistance material, assuring long life use-life ⚡

Green top cap matches the environment ⚡



Product Code- EEP-BFC--08

7-BACKFILL COMPOUND

- ⚡ Non toxic content.
- ⚡ Resistivity less then 0.2 ohm-meter.
- ⚡ Its Maintain conductivity without continous pressure of water
- ⚡ Tested from NABL accredited lab.

Quantity	No. of Bags
25 kg.	1
15 kg.	1
5 kg.	1

**NEW LAUNCH**



# EARTH ENHANCE GEL

## EARTHING BOOSTER ADVANCE GEL

Product Code- EEBAG

Model no.	Description	Weight
EEBAG	Ground Resistance Enhancement Minerals	5 Ltr

## BENAFITS OF EARTH ENHANCE GEL

- ⚡ DUE TO CONDUCTIVE MATERIAL IMPROVE
- ⚡ THE SOIL RESISTIVITY
- ⚡ IT ALSO INCREASES THE CONDUCTIVITY OF EARTH ELECTRODE
- ⚡ NO MAINTENANCE
- ⚡ LONG LIFE
- ⚡ AUTOMETICALLY RECHARGEABLE
- ⚡ NO NEED TO POURING WATER TIME TO TIME

*Earthelectro Earth enhance gel provides the ability to substantially reduce soil resistivity in soil of the purest electrical conductivity such as Rocky ground or sandy soils. Earthelectro Earth enhance gel compromises specifically selected compounds which possess excellent electrical conductivity.*

*when earth enhance gel is mixed with water and pod onto the earthing system and surrounding soil the Powder and water react to form a galantis hygroscopic mass which forms and integral part of the system this effectively increases the surface area of the earth in system in contact with surrounding soil then will not wash away under seasonal conditions and therefore provides a permanent presence in working to improve and maintain the integrity of the earthing system. Earth enhance gel is supplied into 5 ltr. container. It contains a copper compound copper sulphate kit holds a mix of compound which assist in the mixing process hardener.*

### Application

- Power stations substations transmission and communication lines
- Mobile base stations telecom and radio towers radar stations data centres railway signalling equipments etc.
- Petrochemical plants oil and gas facilities defence equipments etc.

## What is Lightning arrester?

Voltage surges are generated in different ways because of lightning. The circuit that gets protected from lightning strokes with the help of a certain device is called lightning arresters.

Lightning arrester diverts the abnormal high voltage to the ground without affecting the continuity of supply. It is connected between the line and earth. Lightning Arresters are typically installed near critical electronic appliances or points of entry, such as an electrical panel or near a generator. the system from the damaging effects of lightning. When potentially harmful lightning strikes, the arrester where it will disperse harmlessly.

## Benefits of lightning arrester:

Allows the surge current to flow really quickly to the ground. Made of stainless steel, best for corrosive environment. Lasts longer, with high durability. Larger area of protection than ordinary Franklin rod

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ALR -01



ALR -02



ALR -03



ALR -04



ALR -05

## ADVANCE ESE LIGHTNING PROTECTION RADIUS TABLE AS PER NFC 17-102 (2011)

ORDER CODE	LENGTH (MM) WEIGHT (KG)	PACKING DIMENSION(MM)	AT (usec)	PROTECTION RADIUS (M) AT 5M.			
				LEVEL I	LEVEL II	LEVEL III	LEVEL IV
ALR-01	400mm, 2.10 Kg.	145x145x450	30	42	48	57	66
ALR-02	400mm, 2.10 Kg.	145x145x450	40	58	65	75	87
ALR-03	600mm, 3.25 Kg.	200x200x650	50	68	75	86	94
ALR-04	600mm, 3.25 Kg.	200x200x650	60	79	86	97	107
ALR-05	600mm, 3.15 Kg.	200x200x650	105	124	132	145	156

Where AT is advanced triggering time in microseconds higher the AT value larger will be protection radius.

### ONE SET OF LIGHTNING PROTECTION SYSTEM CONSISTS OF:

1. ESE lightning conductor - 1no.
2. >5m GI shaft with adaptor head hook and peace let - 1no.
3. Down conductor 17sq. mm. bare copper conductor or 25\*3 copper - strip - as per site.
4. Lightning Counter 6 digits IP 65 - 1no.
5. Earthing - 3 sets Each set consisting of 1no. - copper bonded rod 17.2 mm dia 3m long 250 microns ECBR1720254, 2 bag of backfill compound EARTHELECTRO BF 50 kg. 1no. clamp for connecting rod with cable /strip & 1no. earth pit cover EARTHELECTRO -PC
6. Accessories like insulator, staywire, fasteners etc.
7. Equipotential bonding device as per site condition.

NFC 17-102  
IEC 62305  
IS 3043  
UL 467  
IEEE 837  
SIGMA /METU  
LVT/NABL Lab  
CCPRI  
ISO 9001:2015  
CE  
ROHS



# INSTALLATION PROCESS EARTHING ELECTRODE



- Step 1. Dig a hole with Auger  
Step 2. Hole Measurement : 4" diameter & 3 mtr depth  
Step 3. Insert the Earthelectro Earthing Electrode  
Step 4. With electrode inserted, fill the hole with Advance Ground Enhancing Compound  
Step 5. Pure Water Around the Rod  
Step 6. Place the Earthelectro Earth pit Cover  
Step 7. Cover the Earthelectro Earth pit Cover with soil and ram properly

# **CHEMICAL EARTHING ELECTRODE**

Certified And Tested By  
ISO Certified 9001:2015 Company



## **EARTHELECTRO**

**EARTHING POWER  
SOLUTIONS**

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