Advanced Earthing Electrodes

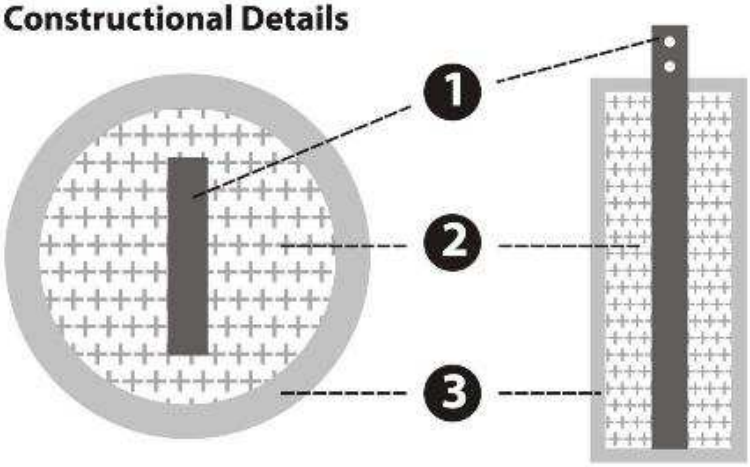
EarthPlus advanced earthing electrodes are engineered to endure the most enviously corrosive environments. These electrodes are robust enough to withstand fault currents of very high magnitude. Fabricated from excellent quality G.I. pipes, these electrodes are virtually indestructible.

The pipes are profiled with proprietary 'super conductive crystalline compound' which encloses the primary conductor completely, increasing it's surface area and also forming a protective layer against corrosion. It never allows the primary conductor to come in direct contact with corrosive elements in the surrounding soil.

Features :

1) Robust design to last for a lifetime
2) Three level protection from corrosion
   a) Outer pipe
   b) Layer of super conductive crystalline compound
   c) Primary conductor

Constructional Details



CPRI Tested

1. Primary Conductor (G.I. or Copper)
2. Super Conductive Crystalline Compound
3. Pipe (G.I. or Copper)

Available in various sizes and specifications to suit the application:

Model #	Length mm	Dia. mm	Primary Conductor size	Primary Conductor Type
SMI-250G	2000	50	40x6x2000mm	GI
SMI-350G	3000	50	40x6x3000mm	GI
SMI-280G	2000	80	50x6x2000mm	GI
SMI-380G	3000	80	50x6x3000mm	GI
SMI-250C	2000	50	40x6x2000mm	Copper
SMI-350C	3000	50	40x6x3000mm	Copper
SMI-280C	2000	80	50x6x2000mm	Copper
SMI-380C	3000	80	50x6x3000mm	Copper

Note: Electrodes can also be manufactured as per clients' given specifications.

EARTH Plus — Advanced Earthing Compound

The most important factor governing the earth resistance value of an earthing system is the soil resistivity. If the soil resistivity is high, the earth resistance will be high, irrespective of the type & size of earthing electrode used.

Keeping in mind the shortcomings of the conventional backfill materials Earthplus advanced earthing compound was developed after extensive research and field studies by our engineers. Following are the salient features of the product.

Features

- Highly conductive earth-pit backfill.
- Capable of reducing soil resistivity by upto 90%
- Non- corrosive there by improving the life of the earthing system. Does not damage the electrode metal in any way.
- Doesn't depend on ambient moisture to sustain the earth resistance values. Thus performs in all weather conditions giving stable earth resistance values.
- Compatible with all types of earthing electrodes, be it pipes, plates or rods of any metal.
- Can also be used in trenches made for horizontal type earthing systems.
- Increases the total surface area of the earthing electrode ensuring quick dissipation of fault currents.
- Maintains constant volume regardless of moisture content. Therefore EarthPlus doesn't shrink or expand. it maintains constant contact with electrode and surrounding soil.
- Long shelf life; can be stored for very long periods without deterioration.
- Environmental friendly; does not pollute or contaminate the water table.

How It Works

In the event of a fault, the fault current will try to dissipate into the ground through the earth connection. All metals are good conductors of electricity, hence the fault current easily passes through the earthing conductor and the earthing electrode. The fault current faces major obstruction only at the interface of the earthing electrode and surrounding soil.

Researchers from around the world have proved that, if the soil immediately surrounding the electrode is replaced with a conductive material, the resistance of this interface can be considerably reduced.

As seen from the relation, the earth resistance, r, of a given earth electrode is directly proportional to soil resistivity (p). Lower the value of soil resistivity, lower will be the earth resistance of the electrode.

Therefore by using EarthPlus advanced earthing compound as backfill, the value of soil resistivity (p) can be considerably reduced. This in turn will reduce the earth resistance (R) of the electrode. this also reduces the number of electrodes required to achieve a particular earth resistance, thereby making the entire earthing system, efficient, durable and cost-effective.

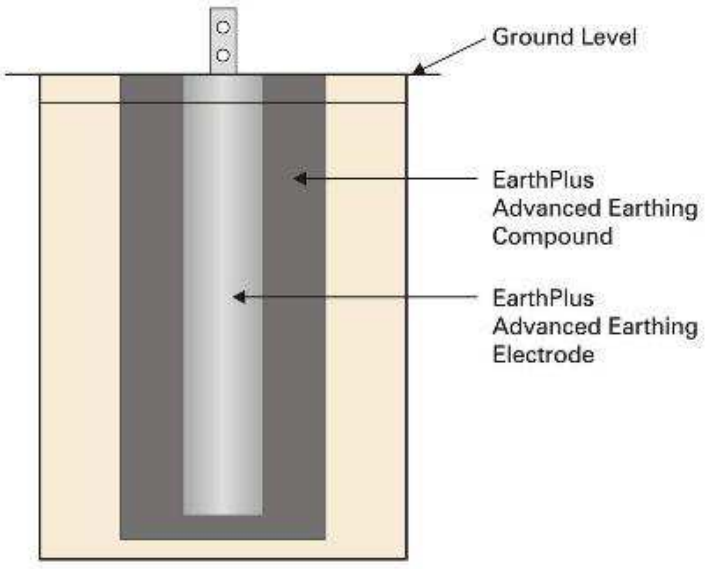
EARTH RESISTANCE OF AN ELECTRODE IS GIVEN BY:

$$R = \frac{p}{1.915L}\left[\ln\frac{96L}{d} - 1\right] \text{ ohms}$$

Where p= Soil resistivity in ohm-meters
L= The electrode length in feet
d= The electrode diameter in inches

Directions For Use

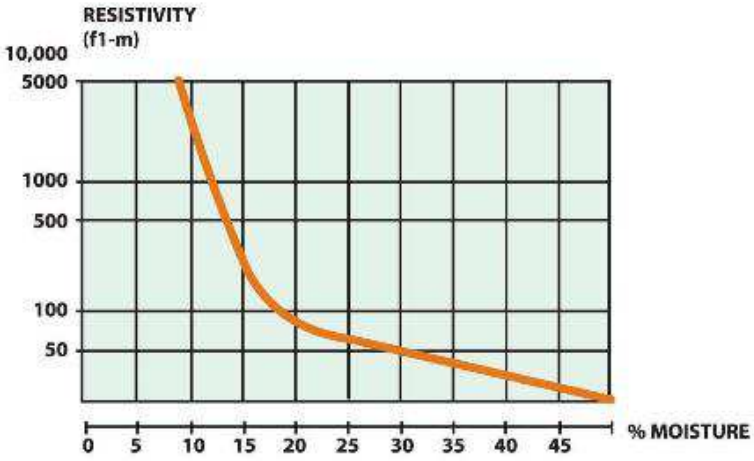
- Drill or augur a hole of 4-8 inches diameter
- Place the electrode in the hole.
- Backfill the space around the electrode with EarthPlus advanced earthing compound.
- Keep pouring water intermittently.



For further details contact us: wccearthplus@yahoo.com or sales@wellcontactsco.com

Bentonite Moisture Retaining Compound

Earthplus Bentonite, moisture retaining compound is produced from highly hygroscopic grades of bentonite. It can be used as backfill material to maintain moisture levels in areas of dry and rocky terrain. It absorbs and retains moisture for very long periods and tends to reduce soil resistivity to a certain extent.



Properties

- Low natural resistivity
- Highly hygroscopic
- Controlled swelling to avoid loss of contact due to change in moisture levels.
- Ability to absorb moisture from surrounding soil

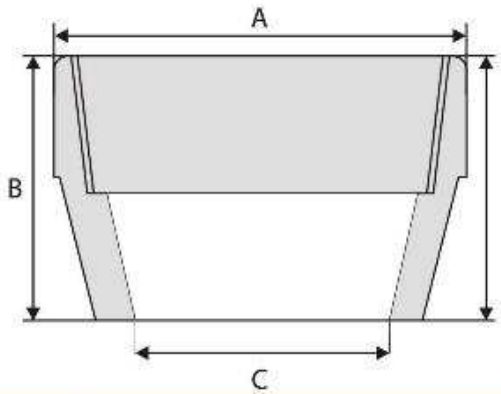
EarthPlus Recharge Compound

This product is another first from **S.M. Innotech Pvt. Ltd.,** EarthPlus, earthpit recharge compound, is a high conductivity & high ion-content compound developed to give a new lease of life to dead earthpits. Due to ageing & formation of rust, and loss of electrolytic properties of the surrounding soil, earthpits exhibit high earth resistance values. Most of the times, it is not a viable option to install new earthpits to replace the old ones. Under such conditions EarthPlus, earthpit recharge compound is the most suitable option.

Formulated to perform, this compound energies the soil surrounding the electrode by improving it's ionic potential. this enhances the conductivity of the soil in the immediate vicinity of the electrode thereby improving the earth resistance of the earthpit. It also attacks the rust formed on the electrodes so that conductivity of the electrode is improved. (For further details please visit our website : www.earthplus.net)

Concrete Inspection Pit

The concrete inspection pit is load rated to 3,500 Kg. and is suitable for most types of earthing and lightning protection installation.



Description	ABC Dimensions	Weight each
Concrete Inspection Pit	320mm x 192mm x 146mm	30 Kg.