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.

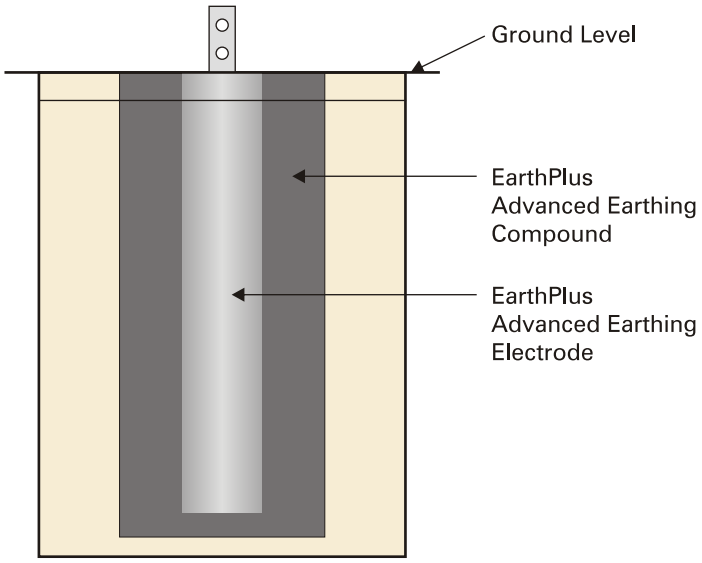
As seen from the relation, the earth resistance, r, of a given earth electrode is directly proportional to soil resistivity (p). Lower the value of soil resistivity, lower will be the earth resistance of the electrode.

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.