



PROTECT YOUR VALUABLES WITH
SI GEL EARTHING ELECTRODE !





What is SI Eco-Friendly Earthing :

SI has developed first ever GEL Earthing after a consistent R&D and is being manufactured & marketed from 1999. With over a decades of expertise and a true backing of 9-10 years of R & D has helped in evolve innovative cost effective & environment friendly solutions for your grounding requirements under the registered brand name SI (Safe Earthing Electrode) & our special hygroscopic compound named SI Back Fill Compound. This world Class Product is manufactured to replace the traditional methods of earthing and is complete solutions suitable to any application requiring high performance earthing. SI Circumstances the inherent defects in the traditional earthing methods like corrosion, self resistance etc. SI Gel Earthing is dedicated to provide innovative, cost-effective & environment friendly solution for your grounding requirements.

Trusted By:

The product is tested and certified by various independent testing laboratories like Central Power Research Institute (C.P.R.I.) Bhopal. Our Proven experience with thousands of applications helped the industries to save money by preventing damage to their valuable equipments.

SI Gel Earthing Aims At:

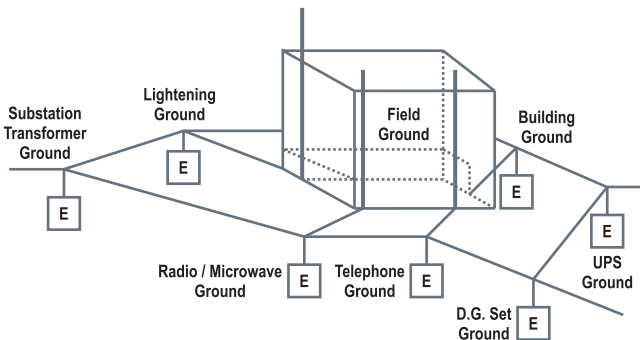
For any industrial & their valuable and sensitive equipment, the voltage difference between individual electronic equipment as well as noise & surges can harm those equipment. For this SI aims at to provided the proper and environment friendly grounding to stop electrostatic or dynamic discharge. Thus SI Aims At.

- ◀ In Controlling Radio Frequency Emissions & Electro Magnetic Interferences.
- ◀ Maintains a stable reference potential for instrument accuracy.
- ◀ Providing a easy discharge path for short circuits and lightning strikes (fault current / surge protection.)

Genext Expertise and R&D:

SI Gel Earthing Electrodes are the genext development in the Earthing Technology. SI is the name of innovative ideas for the new method of all type of earthing is the only reliable & proven name for the any earthing solutions. SI Creating the ideas with making GRID, MESH & TRI-POD as well as Faradey/Octopus earthing solutions. Our SI Gel Earthing can be safely used for the grounding point for lighting protections system.

SI earthing electrode stamp it (as per IEEE guide lines), that earthing pit must be interconnected to each other to form a solid grid, (for big surface area - thus result in fast dissipations of current into the earth).



Earthing Back-Fill Compound :

Our SI Gel Earthing having a strength named Back-Fill compound (B-F-C), our unique back fill-compound is a combination of natural earth minerals, which having the hygroscopic property, to retain the moisture for a long time.

During installation with proper water pouring, our powder B.F.C. convert into the 'gel' and its quality to retain the moisture upto twenty times to its dry volume as well as it create a gel layer surrounding of our electrode, our back-fill-compound is combination of totally corrosion free and highly conductive & non-corrosive minerals. Our unique 'SI' Back-Fill-Compound available in convenient packing of 25kg/15kg/10kg per of bag.

How SI Play The Important Role :

Our unique SI B-F-C maintains the moisture surrounding to the SI Gel Earthing Electrode, which helps to create the balance & consistence ohmic value within the safe limit without any fluctuation of results, as a safeguard of equipment.

- ◀ As Well as its layer works as a highly conductive path to pass the fault current, noise filtrations, resolve the problem of earth to neutral voltage difference ans supported to active/passive lighting protection device too.
- ◀ It, also helps to give the life to our SI Gel Earthing Electrode through its layer between electrode & direct soil, so minimize the chances of corrosion.
- ◀ This enables the 'Compound'-electrode interface, that expands and contracts thus reducing the surge impedance (when charged th B-F-C zone as well as gives the cathodic ray protection to SI Gel Earthing Electrode.



The Benefits of SI Gel Earthing :

- ◀ Highly reliable for safety of human life.
- ◀ High load carrying capacity and maximum fault current dissipation instantly.
- ◀ Maintain low resistance value for a very long period having the bare minimum fluctuations.
- ◀ Ensures protection always and MAINTENANCE FREE SOLUTIONS.
- ◀ Proper galvanizations & highly conductive.
- ◀ Corrosion free with ECO-Friendly Solutions.
- ◀ SI can be used in the form of a grid using 3 or more in nos. in an equilateral triangle configuration, duly inter-connected for highly sensitive projects and requirement of big surface Area.
- ◀ As Per IS : 3043-1987 requirement.

Primary Conducting & Surface Area :

- ◀ SI gives maximum surface Area (in sq. mm).
- ◀ SI gives maximum cross sectional Primary Conducting Area (in sq. mm.)





Technical Specification :

Code No.	Length (L) (mm)	Outer Dia (D2) (in mm.)	Internal Dia (D1) (in mm) approx.	Internal Copper Strip	Terminal (T1 & T2) Point (Dia mm)	MOC
SI - 19/1	1000	46-50 mm	22-25 mm	---	12 mm	GI / CB
SI - 19/2	2000	46-50 mm	22-25 mm	---	12 mm	GI / CB
SI - 19/3	3000	46-50 mm	22-25 mm	---	12 mm	GI / CB
SI - 29/1	1000	58-61 mm	31-33 mm	---	12 mm	GI / CB
SI - 29/2	2000	58-61 mm	31-33 mm	---	12 mm	GI / CB
SI - 29/3	3000	58-61 mm	31-33 mm	---	12 mm	GI / CB
SI - 39/1	1000	76-80 mm	37-41 mm	---	14 mm	GI / CB
SI - 39/2	2000	76-80 mm	37-41 mm	---	14 mm	GI / CB
SI - 39/3	3000	76-80 mm	37-41 mm	---	14 mm	GI / CB
SI - 50/2	2000	47-50 mm	---	40 X 3 mm	12 mm	CU
SI - 50/3	3000	47-50 mm	---	40 X 3 mm	12 mm	CU
SI - 60/2	2000	60-63 mm	---	50 X 3 mm	12 mm	CU
SI - 60/3	3000	60-63 mm	---	50 X 3 mm	12 mm	CU
SI - CBR 17/2	2000	17.2 mm	NA	NA	NA	CB
SI - CBR 17/3	3000	17.2 mm	NA	NA	NA	CB
SI - CBR 25/2	2000	25 mm	NA	NA	NA	CB
SI - CBR 25/3	3000	25 mm	NA	NA	NA	CB

The above specification can be changed at any time for the development of the product.

Note :

- 1) SI-19 Code No-we recommended this for LT application.
- 2) SI-39 Code No-we recommended this for HT application.
- 3) SI-50 Code No-where, only copper earthing is required.
- 4) SI-39 Code No-we recommended it for lightening arrester earthing.

Maximum Surface Area (approx.)

SI-19	SI-39	SI-60
L-2000 mm / 3000 mm	L-2000 mm / 3000 mm	L-2000 mm / 3000 mm
3,14,000 sq mm	5,02,400 sq mm	3,95,640 sq mm
4,71,000 sq mm	7,53,600 sq mm	5,93,460 sq mm

Application :



Transformers



Production Plants



Refineries



Power Transmission Tower



Power Generation Plants



Homes



Windmills



Telecom Towers



Malls

Your Safety is Our Prime Moto :

SI assured you about the safety and protection to Human Life & your Valuable equipments.

The difference is the SI Gel Earthing Electrode back-up With ISI marked G.I. tube. Pipe are hot dipped galvanization both in side and outside.

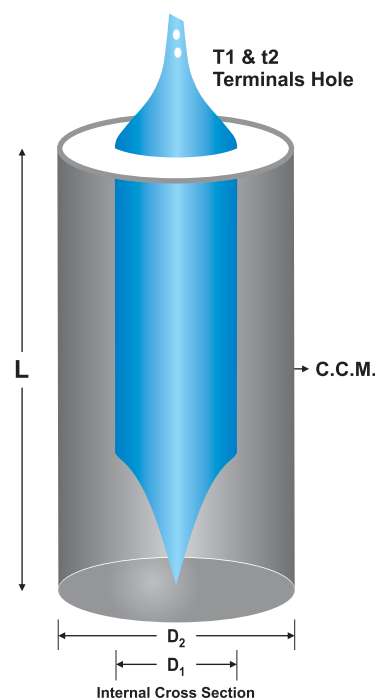
The ISI grade G.I. Pipes filled with Special gel type compound, which increase the active functional life of the earthing electrode with consistent result. Superiority of SI Gel Earthing Electrode are virtually maintenance-free and need to be refill with our backfill compound after a long period of time.

User's :

- ◀ Mobile & Communication Towers.
- ◀ Transmission & Distribution System.
- ◀ Electrical Sub-stations & Power D.G. Sets.
- ◀ All Transformer Neutral/Body Earthing.
- ◀ Both, Active/Passive type Lighting Arrester Earthing.
- ◀ Body Earthing of any equipments.
- ◀ Any Microprocessor based equipment.
- ◀ Manufacturing Industries & Refineries.
- ◀ Food Processing Unit/Water Treatment Plants/ETP/Boilers etc.
- ◀ Oil Refineries & Petrol Pumps.
- ◀ Heavy Furnace/All Type of Industries.
- ◀ Commercial and residential Complex i.e. MALLS etc.
- ◀ Wherever the idea earthing is necessary.

Beauty of Installation :

- ◀ It is recommended to install SI in clay or highly humid soil.
- ◀ Make a pit preferably of 6-8 inch dia upto appropriate length of SI Gel Earthing Electrode. (L.e. 2mtr. Or 3mtr.)
- ◀ Put the SI Gel Earthing Electrode in vertical positions in the pit with the terminal on the top.
- ◀ It is recommended to fill-up the SI back fill compound surrounding of SI Gel Earthing electrode mixed with proper water pouring simultaneously.
- ◀ Normally 2 bags of back-fill compound is recommended for our SI Gel Earthing Electrode but in some case i.e., Rocky Area, bag can be varies.
- ◀ Make joint with suitable copper wire/strip of G.I. wire/strip carry for earthing form your equipment etc. upto the earthing terminals provided on the top of SI Gel Earthing. Beware, don't hash on the electrode while handling and installations, do not use hammer etc.
- ◀ Put the chamber with the cover over the SI Gel Earthing Electrode & even petroleum jelly on the exposed part of SI Gel Earthing Electrode i.e., terminal.
- ◀ Do proper water pouring upto 6-7 days after installation.





PRODUCT COMPARISON

Sr No.	SI Gel Earthing Electrode	Traditional Method of Earthing
1.	There are two pipe, on inside the other i.e, Double pipe protection technology.	One G.I/C.I. Pipe of a particular diameter.
2.	Safe earth electrode is not in direct contact with the soil.	The earth electrode is in direct contact with the soil.
3.	Thus, result in, absence of corrosion.	Liable to fast corrosion. Subsequently decay of earthing pipe/plate.
4.	No fluctuation of Ohmic value. It has been proved at various sites that Ohmic value of SI gel Earthing electrode reduces with age.	Fluctuation of Ohmic value is more, resulting in frequently maintenance of gadgets/machines and may endanger human life too.
5.	Since SI surrounded by highly conductive soil so the change dissipation through the electrode is very high and the current density across the electrode is very low which results in very high fault current, is sufficient to trip the fault relays.	Distribution of short circuit current is less in terms of change dissipation therefore it generates high potential at the pit which results in low fault current in comparison to required tripping circuit of fault protection relays.
6.	Galvanization is adequate i.e. 80 - 100 microns.	Galvanization is not adequate.
7.	Practically no need to change i.e. fit and forget.	Needs to be changed frequently in every 3-4 years.
8.	SI is non-corrosive, so there is not much variations in ohmic value.	Salt, charcoal is used as backfill compound, as salt is corrosive electrolyte, it corrodes GI/CI electrodes, Finally get the high Ohmic value.
9.	The Back Fill Compound used is not soluble in water therefor it becomes the part of the soil around the electrode.	Back Fill Compound (Salt) used will be washed away in rainy seasons and will be resulted as high Ohmic value.
10.	It requires less space and time to install the earthing electrode.	It requires a large space and time to install the Earthing System.

*The size & nos. of Earthing Electrode should be recommended by your Electrical Consultant, Engineers & Contractors, depending on your Infrastructure requirement.
Ohmic value depends upon the soil & site conditions where ever it has to be used.



Saara Earthing India Private Limited

We B'live in Safe Earth...!

RAJKOT - GUJARAT.

Ph. 0281 - 2587392

Website : www.saaraindia.com

E-mail ID: sales@saaraindia.com