TECHNICAL DATA SHEET

Features

- Performs best in difficult soil conditions
- No maintenance required
- Does not wash away
- Independently tested by an Australian University (test report available upon request)

Ordering Code	GRIP-10	GRIP-40
Description:	Ground Resistance Improvement Powder	
Application:	To lower earthing system resistance and impedance to an acceptable level as required in some Standards, e.g., 10 Ω.	
Weight:	Part A = 5 kg Part B = 5 kg	Part A = 20 kg Part B = 20 kg

The requirement to obtain an acceptable earth resistance is extremely important with the installation of any earthing system. LPI's Ground Resistance Improvement Powder (GRIP) provides the ability to substantially reduce earthing system resistance in moderate-to-high resistivity soils, such as rocky areas or sandy soils.

GRIP comprises specially formulated compounds which possess excellent electrical conductivity. When GRIP is mixed with water and poured onto and around the earthing system and surrounding soil, the powder and water react to form a gelatinous, hygroscopic mass which forms an integral part of the earthing system. This action of GRIP increases the surface area of the earthing system in contact with surrounding soil and greatly lowers the contact resistance that is very high in poor soils.

GRIP will not wash away under varying seasonal conditions and therefore provides a permanent presence for improving and maintaining the integrity of the earthing system. Given that GRIP does not wash away, the requirement to re-treat the soil is eliminated.

GRIP is supplied in two kit sizes to suit a wide range of site applications, namely 10 kg or 40 kg. The 10 kg kit comprises two 5 kg containers, one of which contains a copper compound (copper sulphate) and the other one contains various compounds which assist in the mixing process (hardener, etc.). The 40 kg kit comprises two 20 kg kits with the same contents.

Product Application

Since earthing systems are installed in varying soil types and conditions, the application results of GRIP are dependent upon the site-specific conditions. Typically, one 10 kg kit of GRIP will assist in achieving desired earth resistance levels for an earthing system area of 7.5 metres in poor soil conditions and about 30 metres in reasonable soil conditions.

Per many Standards, earthing systems are typically required to achieve a low-frequency resistance of less than 10 Ohms. When installing a radial or grid-type earthing system, it is recommended that all earth electrodes are installed at a depth of between 500 and 600 mm. In order to further assist in improving the earth resistance of the system, it is recommended that excavated soil of poor quality (rocky, sandy, etc.) is replaced with good quality soil (garden loam, clay, etc.) prior to backfilling the trench.

RECOMMENDED KITS OF GRIP-10 (10 KG) REQUIRED FOR BACKFILLING TYPICAL TRENCH INSTALLATIONS.

Width of Trench (mm)	3 x 10 m radials in trench in GOOD soil conditions	3 x 10 m radials in trench in POOR soil conditions
300	1	4

NOTE: For trench dimensions other than those shown above, please contact LPI or an authorized distributor for further advice, or use the online earthing calculator at http://www.lpi.com.au/Products-Services/Earthing-Calculator.

RECOMMENDED KITS OF GRIP-10 (10KG) REQUIRED FOR BACKFILLING DEEP DRIVEN HOLE.

Hole Diameter (mm)	Hole Depth 1200 mm	Hole Depth 3000 mm	Hole Depth 6000 mm
125	1	1	2
200	1	2	4
300	2	4	8

NOTE: For augured hole dimensions other than those shown above, please contact LPI or an authorized distributor for further advice, or use the online earthing calculator at http://www.lpi.com.au/Products-Services/Earthing-Calculator.

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