

TECHNICAL DATA SHEET

LIGHTNING PROTECTION INTERNATIONAL PTY LTD
Comprehensive Lightning and Surge Protection ABN 11 099 190 897

- Direct Strike Protection
- Earthing Products & Solutions
- Surge & Transient Protection for Power, Data, Communications and RF Lines



LPI® Ground Resistance Improvement Powder (GRIP)

Features

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

Product Description



Ordering Code	GRIP-10	GRIP-40
Description:	Ground Resistance Improvement Powder	
Application:	To achieve a DC ground resistance of less than 10 Ohm and impedance of less than 30 Ohms.	
Weight:	Part A = 5kg Part B = 5kg	Part A = 20kg Part B = 20kg

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 soil resistivity in soils of the poorest electrical conductivity such as rocky ground or sandy soils. GRIP comprises specifically selected compounds, which possess excellent electrical conductivity. When GRIP is mixed with water and poured onto 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 effectively increases the surface area of the earthing system in contact with surrounding soil.

GRIP 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. 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 various site application. These include kits of 10 Kg or 40 Kg. A 10 Kg kit comprises two 5 Kg containers; one 5 Kg kit contains a copper compound (Copper Sulphate), whilst the other 5 Kg kit holds a mix of compounds which assist in the mixing process (Hardener). The 40 Kg kit comprises two 20 Kg kits of the same configuration.

Product Application

Given that earthing systems are installed in varying soil types and conditions, it will be appreciated that the application results of GRIP will also be dependant on 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 under extremely poor soil conditions, whilst application in reasonable soil conditions; satisfactory earth resistance levels can be achieved for an earthing system covering up to 30 metres.

Earthing systems are typically required to achieve a DC Ground Resistance of < 10 Ohms and impedance of < 30 Ohms as defined in most standards. If installing either a radial earthing system or grid type earthing system it is recommended that all earthing conductors be installed at a depth of between 500mm and 600mm with a maximum depth of 1000mm. In order to further assist in improving the earth resistance of the system, it is recommended that excavated soil of poor quality (Rocky) be replaced with soil of a good quality (garden loam) prior to backfilling the trench.

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

Width of Trench (mm)	3 x 10m length radial Trench in Good soil condition	3 x 10m length radial Trench in Poor soil condition
300 mm	1	4

For trench dimensions other than those shown please contact LPI or an authorized distributor for further advice.

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

Dia. of Hole (mm)	Depth of Hole (mm) 1200mm	Depth of Hole (mm) 3000mm	Depth of Hole (mm) 6000mm
125mm	1	1	2
200mm	1	2	4
300mm	2	4	8

For augured hole dimensions other than those shown please contact LPI or an authorized distributor for further advice.

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