UltraCrete San-Earth Conductive Concrete

Electrode grounding cement

Conductive cementitous ground enhancing material which improves grounding system performance and extends the life of electrodes by ten times more than standard grounding materials.

- Reliable results even during dry spells
- Enables more compact grounding systems
- Yields low resistance in limited space
- Doesn't shrink or expand
- Doesn't crack when curing
- Improves personnel safety
- Won't be swept or washed away by water or soil movement
- Cost efficient
- Easy to install, only one person required
- Makes excellent contact with surrounding soil
- Improves performance of surge arrestors
- Withstands heavy ground fault currents
- No salt or chemical recharging required
- High compressive strength
- Easy to pour bags
- Reduces corrosion
- Maintenence free
- Extends electrode life up to ten times
- Low resistivity material
- Environmentally friendly
- Electrode theft deterrent
- lowers grounding system resistence

Technical Information

UltraCrete San-Earth Conductive Concrete is a conductive cement ground enhancing material. It improves grounding system performance and extends grounding electrode life, especially in areas with high soil resistivity. UltraCrete San-Earth Conductive Concrete doesn't rely on water and doesn't expand, shrink, or crack over time. It yields consistent performance and is both environmentally safe and maintenance free. It can be easily installed in dry powder form and over time it hardens to become a conductive concrete. It will act as an electrode theft deterrent while protecting electrodes from corrosion and increasing their life up to ten times. Its low resistance and high capacitance, lowers the surge impedance and allows dangerous lightning surges to be quickly diverted into the ground away from valuable equipment and personnel.

Application

UltraCrete SAN-EARTH Conductive Concrete may be used for Grounding & Cathodic Protection using a dry, mortar, or slurry installation method.

Please refer to your specific method statement for application instructions.

Mixing

UltraCrete San-Earth Conductive Concrete may be installed directly from the bag as a dry powder. Water/moisture will be absorbed from the surrounding environment and the conductive concrete will harden over time.

Packaging

25KG 4-Ply bags (48 bags per pallet)
12 probes (4 bags to x1 10m electrode)

Storage, Transportation and Handling

Store in closed original bags at temperatures between 5°C and 30°C. Avoid frost and sunlight. This product must be stored in unopened bags, clear of the ground in cool dry conditions and protected from excessive drafts. If stored correctly and used within 12 months of the date shown on the bag, the activity of the reducing agent will be maintained and this product will contain, when mixed with water, no more than 0.0002% (2 ppm) soluble Chromium (VI) of the total dry weight of the cement.

Shelf Life

12 months in above conditions. Please note: The use of this product after the end of the declared storage period may increase the risk of an allergic reaction. High temperatures and high humidity will lead to a reduced shelf life.

Health, Safety and Environmental

Please ensure that appropriate PPE is used when preparing, mixing and applying products. Always wash your hands before consuming food and make sure that materials are kept safely out of reach of children and animals. Please dispose of packaging and waste responsibly and in accordance with local authority requirements. A full safety datasheet relating to this product is available from instarmac.co.uk

High Specification Concretes

Technical Data

Resistivity of Dry Powder	< 5.0 Ω-cm (< 0.05 Ω-m) typically 1.9 Ω-cm (0.019 Ω-m)
Colour	Grey - Dark Grey
Odour	None
Dry Density	1284.7 kg/m³
Yield	0.02342m³ per 25kg bag
Dry Powder Partial Size	Typically, 80-350 sieve mesh
pH Range	7-11
Compressive Strength*	21 MPa after 27 days (ASTM C293)
Flexual Strength*	3 MPa after 27 days (ASTM C109)
Shrinkage*	0.015% at 27 days
Life Expectancy	50+ years
IEC 62561-7 Standard	Complies
NSF/ANSI 60 Standard	Should comply
Permeability to Water*	1.8 x 10-8 cm/sec
Hygroscopic Property	≥24% of its weight
Corrosion Rate on Copper	4.44 x 10-5mm/year (ASTM G102-89)

*When mixed with water and cured.

Quality Assurance

All products are manufactured in a plant whose quality management system is certified / registered as being in conformity with BS EN IS0 9001. Our products are guaranteed against defective materials and manufacture and will be replaced or money refunded if the goods do not comply with our promotional literature. We cannot however accept any liability arising from the application or use of our products because we have no direct or continuous control over where and how our products are used. All products are sold subject to our conditions of sale, copies of which may be obtained on request.

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