

Product reference: 3/01

Page 1 of 3

Product title: Di-shield

Valid from: 8th December 2004

Last reviewed: May 2019

Type

Di-shield is a polyester co-polymer mixed with glassflake and other fillers to give good dielectric properties.

Di-shield will cure at low temperatures, has excellent adhesion and is able to withstand the high pH generated in the vicinity, of impressed current anodes. Di-shield will continue to cure under water once applied, it requires no primer and is of buttery consistency to prevent slumping, while allowing ease of application at the required thickness.

Suggested use

Specially formulated for resistance to cathodic disbonding, it is mainly used as a dielectric-shield to dissipate current and protect areas immediately adjacent to anodes used for impressed-current distribution.

Limitations

Where a thickness in excess of 6mm is required, this should be achieved in multiple coats. Di-Shield **must only be applied** to blast cleaned surfaces for good resistance to cathodic disbondment.

Health & safety

Read and observe Health and Safety precautions before handling this material. Skin contact should be avoided, especially sensitive skin areas. Protective clothing, gloves, and eye protection should be worn. Wear a suitable fume mask in confined spaces. Do not use in confined spaces without ventilation. Do not ingest.

Surface preparation

1. Remove all weld slag and spatter, grind welds reasonably smooth.

2. Where necessary remove oil and grease by solvent detergent washing or steam cleaning.
3. Minimum grit blast standard is SSPC-SP10 (ISO 8501-1 Sa 2½) or equivalent using a suitable abrasive, to provide a profile of 100um (0.004").
4. Remove blast residues by vacuum cleaning or blowing with clean, dry, oil free compressed air or on vertical surfaces, brushing with a suitable clean brush.
5. Apply Di-Shield as soon as possible after blasting and before color change or the formation of visible rust bloom.

Application equipment

Trowel or short hair, stiff brush.

Mixing ratio / mixing

100:2 parts by weight, base to catalyst. Mix the whole contents of one bottle of catalyst provided into one can of Di-Shield using a heavy-duty power mixer to ensure thorough mixing is achieved. After mixing, remove contents from tin and re-mix on a clean flat surface or in a shallow receptacle.

Product reference: 3/01

Page 2 of 3

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Pot life

Pot life is dependent upon temperature and Di-Shield should only be mixed immediately before application. Usable life will be circa 40 minutes at 68°F (20°C) but will vary significantly, long when cold, short when hot.

Application

Di-Shield is applied at a film thickness of 6 to 8mm from anode edge tapering over a distance of a half meter to a meter to a thickness of 1mm. It should preferably be applied in two coats, but can be applied in a single coat to the required thickness provided 6mm is not exceeded in a single coat. Minimum application temperature is 14°F (-10°C). Surface must be dry and 38°F (3°C) above dew point.

Extending the shield application area to 5 feet (1.5 meters) from the edge of the anode will be advantageous in current dissipation with most systems. In extreme cold conditions product may have long cure time, base can be heated to 68°F (20°C) before addition of catalyst using indirect heating to assist in polymerization.

Thinners

DO NOT THIN. The addition of any thinner or solvent is detrimental to this product.

Packaging

1 Gallon and 5 Gallon kits

Storage life

12 months minimum stored at temperatures below 68°F (20°C) and away from heat sources or direct sunlight.

Color availability

Mid grey.

Volume solids

99.1% solvent free.

Practical spreading rate

4.0 kg per square metre at 3mm.

NOTE: This information is given in good faith but may increase dependent upon environment conditions, the geometry and nature of work undertaken and the skill and care of application. Corrocoat accepts no responsibility for any deviation from these values.

Specific gravity

0.04lbs/cubic inch (1.2 gms/cc) mixed.

Flash point

89°F (32°C).

Catalyst type

Methyl Ethyl Ketone Peroxide, type P2.

Mixing ratio

100:2 parts base to catalyst weight/weight basis.

Cure time

May be immersed within 1 hour of application at 68°F (20°C).

Overcoating

May be overcoated as soon as previous coat has stiffened sufficiently to support the weight of next application. Overcoating of Di-Shield should, where necessary, be carried out within 60 hours.

Cleaning solvent

Acetone, Methyl Ethyl Ketone.

Dielectric properties

Minimum 25 kV at 1mm film.

Product reference: 3/01

Page 3 of 3

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Cathodic disbonding resistance

Excellent, BS 3900/F11 1.5v. Nil disbonding after 56 days.

Abrasion resistance

Excellent, 428mg loss H18 wheel 1000 gm load, 1000 cycles.

Impact resistance

Excellent.

Reviewed 12/2004
Reviewed 02/2014 (No changes)
Reviewed 10/2017 (No changes)
Reviewed 05/2019

All values are approximate. Physical data is based on the product being in good condition before polymerization, correctly catalyzed and full cure being attained. Unless otherwise stated, physical data is based on a test temperature of 68°F (20°C), test results may vary with temperature. Information regarding application of the product is available in the Corrocoat manual. Should further information be required, please consult Corrocoat Technical Services.