

Product reference: 3/05

Page 1 of 2

Product title: Biofoul

Valid from: 18th December 2007

Last reviewed: May 2016

Type

A three-pack, cold-cured polyester containing metallic (inorganic) copper flakes. Corrocoat Biofoul is considered non-toxic; it has excellent long-term anti-fouling properties and will withstand flow velocities in excess of 25m/s.

Suggested use

Biofoul has been specially formulated as a durable, long-life, heavy duty, anti-fouling coating. It can be applied to metal over a corrosion barrier or it may be used in mould prior to the gel coating to give anti fouling protection to GRP structures. It may also be applied directly to GRP that has had suitable surface preparation. It can also be used to give the appearance of copper cladding to architectural features and exhibits the appearance of copper verdigris in service.

Limitations

When applied to metallic substrates, this product should only be applied over a corrosion barrier of a Polyglass series or other Corrocoat material and over a suitably primed surface on wood or concrete.

Health & safety

Before handling or using this product, first consult the material safety data sheet.

Surface preparation

On metallic surfaces, Corrocoat Biofoul should be applied over the top of a suitable corrosion barrier which has been correctly applied on a prepared substrate. Corrocoat Biofoul can also be applied to GRP, concrete and wood with suitable surface preparation. For details, please consult Corrocoat Technical Services.

Application equipment

Preferably spray applied using airless equipment to obtain a smooth surface and optimum performance but may be applied by brush.

Mixing and application

Remove the lid from the paste container. Stir to mix the contents into a smooth even paste. The addition of 2% by volume of styrene added to the paste may aid this process but should not be used unless necessary. Add the contents of the resin container to the paste container. Using a mechanical agitator, mix thoroughly then immediately add the organic peroxide and agitate until thoroughly mixed. Apply the product immediately as pot life can be short at high ambient temperatures.

Best results are obtained from a smooth surface. When applying by brush, light brushing with styrene immediately after application will aid smoothing. Do not pre-mix the resin and paste prior to addition of the catalyst, this will both shorten the pot life and storage stability.

Apply Biofoul at a thickness of 250-400 microns. Providing the maximum overcoating time of 3 days is not exceeded, Biofoul may be overcoated by itself. This period must be shortened at high temperatures and in strong UV light conditions.

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Page 2 of 2

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Mixing Ratio

Resin: 24.5 parts.
Paste: 73.5 parts.
Catalyst: 2 parts.

Pot life

40-50 minutes at 20°C.

Thinners

Do not thin, except by the addition of no more than 5% styrene. This will affect viscosity and may affect hold up. Addition of other thinners will affect the product's performance.

Colour

Metallic copper appearance.

Recommended DFT

250-400 microns.

Practical coverage

Approximately 1.80m²/litre at 400 microns.

Spreading rate

Note: this information is given in good faith but **rate may vary significantly** dependent upon environmental conditions, the geometry, nature of work undertaken and the skill and care of application. Corrocoat accepts no responsibility for any deviation from this value.

Specific gravity

1.97 gm/cc (mixed).

Flash point

Resin: 32°C.
Paste: 68°C.

Overcoating

When applying to Polyglass grades, over-coating may take place as soon as the previous coat has gelled. Adhere to maximum over-coating time in accordance with the standard product data sheets.

Cleaning solvent

Methyl ethyl ketone, methyl iso butyl ketone and acetone - before gel.

Packaging

5 and 10 litre composite kits.

Storage life

Six months stored at temperatures below 24°C and away from heat sources and direct sunlight. Frequent temperature cycling will shorten storage life. Corrocoat Biofoul works by the dissolution of metallic copper ions into the surrounding environment. The dissolution of ions will reduce as the copper verdigris forms but is increased due to the action of fouling organisms attaching to the surface. Generally, as soon as the increase in copper ions takes place the fouling will release.

Metallic copper anti-fouling has been used for many years on wooden hulled ships in the form of copper sheets, in low concentrations it is considered non-toxic both to marine and mammal life forms.

Note: Under certain conditions the use of cathodic protection may reduce or stop the dissolution of copper ions and render Biofoul inoperative.

Information regarding application of the product is available in the Corrocoat manual. Should further information be required, please consult Corrocoat Technical Services.

Reviewed 12/2007
Reviewed 02/2014 (No change)
Reviewed 05/2016 (No change)