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INFORMATION GUIDE

FERRO CEMENT

Introduction

As a construction method, Ferro-Cement is a very cost effective material and lends itself to amateur building. However, this substrate (like all others) demands its own special system of protection. Unlike other surfaces Ferro-cement cannot be burnt-off, or effectively stripped with Paint Stripper, therefore the selection of a protective system has to be made **very carefully**.

Because the substrate retains moisture in the building process, it is important that **consideration of this** be made prior to painting. Logically, the paint system should act as a non-return valve, allowing the transmission of moisture vapour to **escape** under pressure from within the hull, but at the same time, provide a barrier against water ingress from external forces.

To achieve this, the first task is to prevent **additional** water getting into the hull, by sealing off the **inside first**. Seeing that most Ferro-Cement craft are constructed, right side up and left exposed for considerable periods, they are prone to taking in substantial volumes of water which eventually will migrate through to the outer surface and cause paint delamination. **To overcome this, the first coat applied to a Ferro-Cement hull must be on the inside**. IMPORTANT: Because the outer surface is **always** going to be warmer than the interior, the migration of moisture is **always** going to track towards the outer surface. Once the moisture intake has been stabilized, and the exterior is deemed to be dry, normal painting procedures can begin.

NORGLASS SHIPSHAPE PRIMER UNDERCOAT is recommended for all priming and undercoating of Ferro-cement surfaces. The epoxy resin in **SHIPSHAPE PRIMER UNDERCOAT** provides the adhesion to the Ferro-Cement, whilst the pigment structure allows the transmission of entrapped moisture vapours to pass through the film without impairing the performance of the coating. Internally, the density of the SHIPSHAPE is sufficient to prevent the **ingress** of water primarily because it is not under pressure.

Preparation

NEW WORK (Interior)

1. Allow a minimum of 1 month for the concrete to cure. Remove **all** water from the bilge and internal areas. Allow to dry thoroughly, or force dry.
2. Brush the interior thoroughly to remove dust, dirt etc. Vacuum clean.
3. Fill holes/surface imperfections with **NORFILL WHITE EPOXY FILLER**.
4. Apply 1 coat of **SHIPSHAPE PRIMER UNDERCOAT** thinned 10% with **NORGLASS EPOXY THINNER**. Apply by brush and roller and allow a minimum of 16 hours to cure. Apply a second, un thinned coat in the same manner.
5. In the bilge area a further coat of **SHIPSHAPE PRIMER UNDERCOAT** is desirable to act as a finish coat (Shipshape is available in white or grey) However the normal practice would be to leave it white to afford the greatest contrast against oil spills and other foreign items that may find their way into the area.

Above waterline a decorative finish can be achieved by using **WEATHERFAST PREMIUM ENAMEL** applied over the **SHIPSHAPE**. Alternatively the surface can be left without further treatment as **SHIPSHAPE** provides a **satin finish** to enhance oiled or varnished timber trim.

NEW WORK (Exterior)

1. Remove all visible signs of tie-wires, rust spots and exposed mesh by chiselling to a depth of 3mm below the surface and fill with **NORFILL EPOXY FILLER**.
If dampness exists around the area to be filled use a heat gun to force dry the concrete before filling.
2. Scrub the surface over with an undiluted solution of bleach and warm water and allow to react for 20 minutes. Hose off with fresh water and allow to dry thoroughly before continuing.
IMPORTANT: Protect eyes and skin from splashes by wearing protective clothing and goggles during application
3. Apply 1 coat of **SHIPSHAPE PRIMER UNDERCOAT** by brush/roller, and allow 24 hours to cure before repeating with more coats. If spraying, multiple coats can be applied using a wet on wet technique, but the first coat is better applied by brush/roller for best adhesion.
4. Cosmetically fill any above waterline areas with **NORFLEX EPOXY FILLER** or **NORGLASS NORSYSTEM BOAT EPOXY RESIN** with **NORCELLS** and sand smooth.
5. Apply 2 or more additional coats of **SHIPSHAPE PRIMER UNDERCOAT** as above.
6. Finish with **NORTHANE GLOSS** or **WEATHERFAST PREMIUM ENAMEL**.
7. **Below waterline** apply 1-2 coats of **SHIPSHAPE PRIMER UNDERCOAT** followed by 2 coats of **ANTI-FOULING** after stage 5.

PREVIOUSLY PAINTED SURFACES

Where the coating system appears to be in good condition all that is required is a wash down with commercial detergent and warm water. Then lightly sand and recoat with **WEATHERFAST PREMIUM ENAMEL** finish coat.

If the paint structure is peeling it may be advisable to inspect the **interior bilge surface** for water, because any water ingress will work its way through the hull and, form hydrostatic pressure and push the external coatings off. In this case it is essential to dry out the interior area thoroughly and apply 1-2 coats of **SHIPSHAPE**, **before** coating the exterior areas.

CAUTION

By nature of this construction method it is more than likely the hull surface will be less than totally fair when finished. With this in mind it is more practical to use a single pack finish paint over the **SHIPSHAPE** so that recoating is not an ongoing problem. With a surface profile similar to that of an orange skin it is not possible to sand **all** of the area down. Only the high spots, or 50% of the old coating can be abraded leaving the other half susceptible to reduced adhesion and potential peeling. With a chemically cured finish such as **NORTHANE** this risk is there and should be carefully considered when making the final selection. **WEATHERFAST SATIN WHITE** is an excellent choice for compromising the profile irregularities.

NOTE:

Due to the potential retention of moisture vapour in the hull **NO impervious coating** should be applied over the **SHIPSHAPE** below the waterline externally. In other words, all that should be applied to this area is **SHIPSHAPE** and anti-fouling. Any spot filling with NORFILL is acceptable, but no major filling should be contemplated.