



## 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 substrates 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 content 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 white pigment structure allows the transmission of entrapped moisture vapours to pass through the film without impairing the performance of the coating.

### 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.
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, unthinned 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. This can be tinted to a light grey or cream by using domestic tinters or **NORGLASS PIGMENT PASTE**. 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 MARINE 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**.  
NOTE: If signs of dampness still exists in these areas use **AQUAFILL GREY** which will tolerate the dampness and provide an excellent alternative repair. **AQUAFILL** also sets underwater and can be used for emergency repairs
2. Scrub the surface over with an undiluted solution of **NORGLASS CONCRETE CLEANER** 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 or spray, and allow 24 hours to cure.
4. Cosmetically fill any above waterline areas with **NORFLEX EPOXY FILLER** or **NORGLASS G.P. EPOXY RESIN** thickened with **GLASS BUBBLES** and sand smooth.
5. Apply 1 or more additional coats of **SHIPSHAPE PRIMER UNDERCOAT** as above.
6. Finish with **NORTHANE GLOSS** or **WEATHERFAST ENAMEL**.
7. Below waterline apply 1-2 coats of **SHIPSHAPE PRIMER UNDERCOAT** followed by 2 coats of **NORGLASS TOPFLIGHT** or **SOFT COPPER 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 **NORGLASS BOAT DETERGENT** and warm water. Then light sanding and recoating with the selected finish coat.

If the paint structure is peeling it may be advisable to inspect the interior bilge area for water, because any ingress will work its way through the hull and form hydrostatic pressure and push 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.

### **NOTE:**

Due to the potential retention of moisture vapour in the hull no impervious coating should be applied over the **SHIPSHAPE** below the waterline. In other words, all that should be applied to this area is **SHIPSHAPE** and anti-fouling.

Consult your supplier for data sheets on the NORGLASS products mentioned herein or contact:

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