

# Preparation and priming of bare substrates

Throughout this manual we have been stressing the importance of good and thorough preparation. Poor priming will make it virtually impossible to achieve a good cosmetic finish, and more importantly, it can lead to premature failure of the coating system.

## Glass fibre



**Glass fibre, or GRP as it is often known, is made from polyester resin reinforced with chopped or woven glass fibres. Once the resin sets to a hard matrix the resulting laminate is strong and rigid. The smooth exterior is a protective gelcoat, made from polyester resin.**

Glass fibre can also incorporate foam or balsa in the form of a sandwich between two laminates. This makes a very stiff panel and is often used in deck areas and topsides instead of frames.

Where a more advanced resin such as vinyl ester or epoxy have been used, either with glass or higher performance reinforced fibres such as kevlar or carbon, the terms FRP (Fibre Reinforced Plastic) or composite are used. In all cases, the procedures for glass fibre are appropriate with regards to surface preparation and priming.

Despite its obvious advantages, experience has shown that glass fibre is susceptible to the effects of sunlight and the marine environment.

### Features of glass fibre

A well maintained glass fibre boat can last for a long time. However, as a boat owner you should be aware of its limitations in order to keep your boat in good condition. There are a number of points to consider:

# Glass fibre

## **Glass fibre is prone to osmosis!**

Osmosis is the process by which water gets into the laminate, reacts with the resin and other chemicals contained in it and forms blisters which can eventually lead to the breakdown of the laminate. Greater detail on this subject is given in the Anti-Osmosis section on page 25.

## **Gelcoats fade!**

Eventually the gelcoat will begin to fade. This is a result of the attack of UV (Ultra Violet) light in sunlight. Conditions can occur which cause loss of gloss and 'chalking', where the surface gradually breaks down to a powder. Polishing with wax may delay this, but eventually a coat of paint will be needed to protect the gelcoat surface.

## **Preparing a glass fibre surface**

Special releasing agents are used by manufacturers to remove a glass fibre hull from its mould. It is essential that these agents are removed from the surface before painting. Clean with Yacht Line Super Cleaner, leaving it on the hull for 10-20 minutes before washing off. This should ensure that all grease and release agents are removed.

Wash the hull with fresh water. If the hull is completely clear of grease the water will spread out evenly on the surface. If grease is still present, the water will form small droplets which will indicate

more cleaning is necessary with Yacht Line Super Cleaner.

Any minor cracks and blemishes above the water-line can be filled with Interfill 200 Topsides Filler or Watertite Epoxy Filler. Only the latter should be used for underwater filling.

To ensure good adhesion of the paint and present the smoothest surface, rub the hull down with 280 grade wet or dry paper.

All sanding dust should be removed by wiping over with a dust wipe.

## **Priming glass fibre**

The purpose of priming is to provide protection to the substrate and to promote good adhesion of the paint system.

### **Below the water-line**

For the best protection of a glass fibre hull below the water-line, an International Gelshield 200 scheme should be applied prior to the selected antifouling. See the Anti-Osmosis section on page 25 for further advice.

If a protection scheme is not to be used, please refer to the table on the next page.

### **Above the water-line**

If the surface is in good condition, it is not normally necessary to apply a separate primer as the undercoat for the paint will provide the necessary adhesion. If the surface has become 'chalked', it



can absorb solvents from the paint system which can cause microblistering problems later. To avoid this, a 100% solids epoxy system such as Gelshield solventless epoxy and HT9000 epoxy can be applied to the surface. This will seal it and provide a stable base for the paint system.



**HINT**

UP TO 80% OF THE DURATION OF A JOB CAN BE SPENT IN PREPARATION AND PRIMING AND NOT A MOMENT OF IT IS WASTED. GOOD PREPARATION IS THE KEY TO A SUCCESSFUL FINISH.

**Handy Specs**

**PRIMING GRP \***



 Above Water		Conventional	No. of Coats	High Performance	No. of Coats
Pre-treatment		(not needed)		(not needed)	
Surface Primer		(not needed)		(not needed)	
Filler		Interfill 200 (if needed)		Interfill 200/Watertite (if needed)	
Primer		(not needed)		(not needed)	
 Below Water		Conventional	No. of Coats	High Performance	No. of Coats
Pre-treatment		(not needed)		Gelshield 200/VC Tar2	1**
Surface Primer		(not needed)		Gelshield 200/VC Tar2	1
Filler		Watertite (if required)		Watertite (if needed)	
Primer/Tiecoat		Primocon	1	Gelshield 200/VC Tar2	4

\* For osmosis protection, Gelshield 200 or VC Tar2 should be used.

\*\* The first coat of Gelshield 200 should be green and the next grey, alternating thereafter.

