Australian Made NORGLASS Specialty Finishes Australian Owned

NORGLASS LABORATORIES PTY LTD
1/59 Moxon Rd Punchbowl NSW 2196
Ph: 02 97082200 Fax: 02 97963069
Email: reception@norglass.com.au

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INFORMATION GUIDE

PAINTING GALVANISED SURFACES

One of the protective processes for preserving iron/steel is to electrically coat the metal with zinc. This creates a surface of zinc plates to give a "fish scale" or overlapping effect to preclude water/moisture from creating an electrolyte and thereby prevent oxidisation of the iron/steel.

However, this plating process also causes problems where a paint system is to be applied. On a boat trailer for example, the normal course of action is to leave it to naturally weather for up to 24 months by which time the platelets would have oxidised to leave a dull flat surface.

During continuation of the weathering process, the zinc oxides and hydroxides react with carbon dioxide in the atmosphere and progress into a thin, compact, tightly adherent layer of basic zinc carbonate. This progression to zinc carbonate enhances the excellent barrier protection afforded by the galvanised coating. Because the zinc patina is relatively insoluble, it prevents rapid atmospheric corrosion of the zinc on the surface of galvanised steel.

Where the weathering process of up to 2 years has not been allowed to occur the consumer often gets impatient, coats the metal over, and then finds a few months later, all of the paint is peeling off. In many cases, the cause is the result of using the **wrong paint products…** without knowing why.

Where a "traditional" oil based product is used, it is usually the **resin** in the coating that causes the failure. "Oil based" products are normally based on ALKYD RESINS. When these are used on galvanised steel, "saponification" is created, and the alkyd resin converts into a fatty soap compound and adhesion is lost.

The selection of paint therefore is critical.

Norglass **METAL-ETCH** should be used on new galvanised surfaces, but as a precautionary measure it should be used on old galvanised surfaces as well. It is a very simple process. You apply the metal etch with a brush, wait 10 minutes and wash off with water.

On the day of painting another clean up of the surface is required, and this should done with Norglass **NORCLEAN-PLUS**. The surface should not be touched with a bare hand during this final clean process, so the recommendation is to wear gloves. Once done, the surface should have its first coat of primer as soon as possible.

The NORGLASS recommendation is for the primer to be a two pack epoxy resin, as these resins offer the **maximum adhesion to galvanised iron**. Minimum 2 coats.

The first choice would be Norglass **NORSHIELD** due to its anti-corrosive properties. However, if over coating with a white finish, **SHIPSHAPE PRIMER-UNDERCOAT** could be substituted (Both epoxies).

Finish coats should always be Polyurethanes either Norglass **NORTHANE** or **WEATHERFAST PREMIUM ENAMEL**, as urethanes have the best weathering properties and do not degrade as quickly as Epoxy finish paints.