

Etch Primers

3.7.1

What Are They?

Etch Primers are single pack metal primers formulated with a combination of resins to maximise adhesion to the various metal surfaces on which they may be used. A low level of **phosphoric acid** is present in these primers to **etch the metal surface** and improve adhesion. The coatings also contain **zinc phosphate** anti-corrosion pigment for steel surfaces. An important point to note is that they are formulated with **low volume solids** so that **film builds** can be **kept low** (10 - 20 μm).

When Should They Be Used?

Etch Primers are intended for use as primers on new or relatively sound ferrous and non-ferrous metal surfaces. Examples of the types of surfaces on which these products would be used are light-weight tubing or thin sheet metal surfaces that **cannot be prepared by abrasive blast cleaning**. In such cases the combination hand/power tool abrasion and acid present in the primer generally provides sufficient adhesion to allow the use of thin film two-pack finishes. Severely corroded surfaces or those that can be prepared by abrasive blast cleaning would be better served by a surface-tolerant or conventional two-pack epoxy primer, as these products offer better long term corrosion protection than etch primers.

Advantages

The advantages of this type of product over other metal primers are as follows:

- *Provides good adhesion over a variety of different metals.*
- *Can be applied with minimal preparation (clean, degrease and abrade, refer to data sheets).*
- *Rapid cure, allowing overcoating with thin film, two-pack topcoats in substantially less than 1 hour.*

Precautions

These precautions are **typical of all single-pack etch primers**:

- *The product is intended for use in **thin film systems** (50 – 100 μm total film thickness) and so **cannot** be expected to provide the **level of corrosion protection** achievable with systems using conventional two-pack epoxy primers or surface tolerant epoxies.*
- ***Higher** than recommended film builds will **risk delamination** of the coating.*
- *Relatively **short** and restrictive recoat window may **create difficulties** for larger jobs.*
- *Brush and roller application is suitable for small areas only; otherwise the primer **must be sprayed**.*

When Should They Not Be Used?

When long-term corrosion protection in coastal environments is required, a **zinc-rich primer** should be used as part of a **heavy-duty, high build, two-pack system**. **Etch Primers** are not adequate.

Etch Primers are **not** for use over **previously painted** surfaces, as the **phosphoric acid** present in the etch primer interferes with subsequent coatings, causing **delamination**.

For more information, please contact your Dulux Protective Coatings Technical Representative.