

ETCH PRIMERS

WHAT ARE ETCH PRIMERS?

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 - 15 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 excellent 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 topcoats in substantially less than 1 hour.
- Zinc phosphate pigmentation offers some degree of inhibitive corrosion protection.

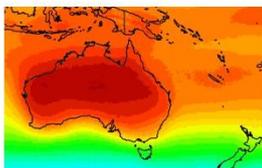
WHEN SHOULD THEY NOT BE USED?

When corrosion protection in coastal environments is required, etch primers are not adequate. A zinc-rich primer should be used as part of a heavy-duty, high build, two-pack system.

Etch primers work by acid etching the metal surface. Therefore they have little effect on previously painted surfaces (including pre-coated sheet steel such as Colorbond®). In fact, the phosphoric acid present in the etch primer may interfere with the adhesion of subsequent coatings, causing delamination.



Whilst the etch primer should be sprayed to ensure a thin, even film, the topcoat can be brushed.



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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 protective coating systems.
- **Higher** than recommended film builds (usually around 10 µm will **risk delamination** of the coating).
- Relatively **short** and restrictive recoat window may **create difficulties** for larger jobs.
- Brush and roller application are suitable for small areas only; the primer **should be sprayed** to ensure a thin and even film build.

IN SUMMARY

Etch primers are convenient for the priming of all types of metal that require a very quick turn-around time. They only require a very thin coat in order to etch the metal surface and create a tenacious bond. Zinc phosphate pigment offers some degree of corrosion protection. The fast dry characteristics allow the topcoat to be applied shortly after primer application.

The thin film limits application to metals in low corrosivity environments and is unsuitable for heavy duty, high film build intermediates and topcoats.

Etch primers are unsuitable for previously coated and/or non



Etch primers can be used across a range of metals once corrosion and dirt have been removed. ensure dissimilar metals are isolated from each other, or corrosion will continue



Once the etch primer has dried, it is ready to paint.

For more information, please contact the Dulux Protective Coatings Technical Consultant in your state.