DURAVEX Paints



Duravex IronPrime Metal Etch Primer is a high-performance, anti-corrosive metal etching primer designed to chemically etch, passivate, and promote superior adhesion on a wide range of ferrous and non-ferrous metal substrates. IronPrime is formulated to provide excellent keying and corrosion resistance, creating a stable and durable surface for subsequent coating systems. It is suitable for both interior and exterior applications where long-term protection and reliable topcoat adhesion are required. The product is engineered for use under protective coatings, waterproofing systems, and architectural or industrial topcoats.

.

IRONPRIME

KEY PROPERTIES

- Chemically etches and passivates metal surfaces.
- Promotes exceptional adhesion of subsequent coatings.
- Anti-corrosive and rust-inhibiting properties.
- Suitable for ferrous and selected non-ferrous metals.
- Fast drying and easy to apply.
- Designed for professional and industrial use.
- Compatible with water-based and solvent-based topcoats, provided IronPrime has been allowed to fully cure prior to overcoating.

PRODUCT USES

IronPrime Metal Etch Primer is recommended for use on the following substrates after correct surface preparation:

- Mild steel and carbon steel.
- Galvanised steel (new or weathered), provided the surface has been thoroughly degreased prior to application.
- Chromadek®, ZincAlume®, and AluZinc®.
- Cast iron.
- Aluminium, provided the surface has been mechanically abraded and properly cleaned prior to application.
- Previously painted metal surfaces where bare metal is exposed, following appropriate surface preparation and cleaning.

Typical applications include:

- Metal roof sheeting and associated roofing components.
- Structural steelwork and supporting frameworks.
- Gates, fencing systems, balustrades, and handrails.
- Metal window and door frames.
- Tanks, pipes, flashings, and related metal components.
- Industrial and commercial metal substrates and surfaces.

TECHNICAL INFORMATION

Physical Form:	Non-flammable viscous coloured liquid.
Finish:	Smooth matt.
Colour:	Red Oxide.
Total Solids Content (TSC):	± 50%
Pigment Volume Concentration (PVC):	± 33%
Viscosity:	± 85 - 95 Krebs Units (KU)
pH:	± 8.5 - 9.5
Specific Gravity:	± 1.22
Spread Rate:	± 8 – 10 m² per litre per coat (depending on surface profile).

Recommended Coats:	1 coat (2 coats for aggressive or coastal environments).
Wet film thickness (WFT):	± 100 – 160 microns per coat.
Dry film thickness (DFT):	± 15 – 30 microns per coat.
Drying time @ 25 °C:	Touch dry: ± 30 – 60 minutes.
Recoat Time:	± 2 – 4 hours.
Overcoating:	Water-based: ± 4 hours / Solvent-based: ± 24 hours.
Cleaning of Equipment:	Application equipment should be cleaned immediately after use using clean water or a suitable solvent cleaner, as appropriate to the coating system, while the product is still wet.
Application Methods:	Brush, roller, or airless spray.
Shelf Life:	± 12 months when stored unopened.
Storage:	Store in a cool, dry place away from direct sunlight.

Note: *Drying times and coverage may vary depending on ambient temperature, humidity, surface condition, and film thickness.*

APPLICATION & SURFACE PREPARATION

1. APPLICATION AND SURFACE PREPARATION

Correct surface preparation and application are critical to achieving optimum adhesion, corrosion resistance, and long-term performance of IronPrime Metal Etch Primer. All work must be carried out in accordance with good coating practice, applicable standards, and recognised industry methods. Failure to adequately prepare the substrate or to apply the product under suitable conditions may result in premature coating failure, corrosion breakthrough, or loss of adhesion.

1.1 General Surface Assessment and Preparation

Before application, all substrates must be thoroughly inspected and assessed for suitability. Surfaces must be:

- Structurally sound and stable.
- Clean, dry, and free from dust, dirt, salts, oil, grease, waxes, curing compounds, and other contaminants.
- Free from loose corrosion products, mill scale, laitance, and poorly adhering coatings.

Any contamination or surface defects that may impair adhesion must be removed prior to priming. Where there is uncertainty regarding substrate condition or compatibility, a test patch is strongly recommended.

1.2 Removal of Corrosion and Existing Coatings

All loose and active corrosion must be removed by suitable mechanical means, including but not limited to:

- Wire brushing.
- Hand or power sanding.
- Mechanical grinding.
- Abrasive blasting where appropriate.

Preparation should ideally return the metal substrate to a clean, bright, and sound condition. Embedded or tightly adherent corrosion residues should not remain. Once preparation is complete, all residues and debris must be removed prior to coating. IronPrime must be applied as soon as practically possible after preparation to minimise the risk of flash rusting or surface contamination.

1.3 Mild Steel and Carbon Steel Substrates

- Remove all rust, mill scale, oxidation, and surface contaminants.
- Prepare the surface to a clean, bright metal finish.
- Ensure edges, welds, and joints are adequately cleaned and prepared.
- Remove all dust and abrasive residues using clean, dry methods.
- Apply IronPrime promptly after preparation.

1.4 Galvanised Steel, Chromadek®, ZincAlume® and AluZinc®

- New galvanised surfaces must be degreased to remove rolling oils and passivation residues.
- Surfaces must be cleaned until a water break-free condition is achieved.
- Smooth or glossy surfaces should be lightly abraded to improve mechanical adhesion.
- Weathered galvanised steel must be cleaned to remove oxidation products, dirt, and atmospheric contaminants.
- Rinse thoroughly where cleaning agents are used and allow surfaces to dry completely before application.

1.5 Aluminium and Other Non-Ferrous Metals

- Degrease thoroughly to remove oils and surface contaminants.
- Lightly abrade to remove oxidation layers and to provide a mechanical key.
- Remove all dust and residues prior to priming.
- Ensure the substrate is completely dry before application.

1.6 Previously Painted Metal Surfaces

- Remove all loose, flaking, peeling, blistered, or chalked coatings.
- Sound, well-adhered coatings must be lightly abraded to provide a suitable key.
- Feather edges between bare metal and intact coatings to ensure uniform film build.
- Spot-prime all exposed bare metal with IronPrime prior to full system application.

1.7 Application Procedure

- Stir IronPrime thoroughly before and during application to ensure uniform consistency.
- Apply by brush, roller, or suitable spray equipment.
- Apply in thin, even coats to achieve the recommended film thickness.
- Avoid excessive application, runs, sagging, or pooling.
- One coat is generally sufficient under normal conditions; however, two coats are recommended for coastal, industrial, or aggressive environments.

1.8 Drying, Curing, and Overcoating

- Allow IronPrime to dry under suitable ambient conditions before overcoating.
- Drying times are based on ± 25 °C and 50–65% relative humidity and may vary depending on conditions and film thickness.
- Water-based topcoats may generally be applied after approximately 4 hours.
- Solvent-based, high-build, or chemically cured coatings should only be applied after a minimum of 24 hours curing.
- Where epoxy or polyurethane systems are specified, compatibility testing is strongly advised.

1.9 Application Conditions and Limitations

- Do not apply if rain, dew, or condensation is expected before full curing.
- Do not apply when surface or ambient temperatures are below 10 °C or above 35 °C.
- Do not apply to damp, wet, or condensation-affected substrates.
- Avoid application during early morning or late afternoon in cold conditions.
- IronPrime must not be used as a rust converter and must not be applied over loose or active corrosion.

2. MIXING PROCEDURE

IronPrime Metal Etch Primer is supplied ready for use and must not be diluted. Stir thoroughly using a suitable paddle or low-speed mixer prior to application to achieve a uniform consistency. During extended application, periodic stirring is recommended to prevent pigment settlement. Do not mix with other products, solvents, or additives.

3. CLEANING OF EQUIPMENT

All application equipment must be cleaned with clean water immediately after use while the product is still wet.

4. HEALTH, SAFETY, AND HANDLING

Avoid skin and eye contact. Wear suitable personal protective equipment, including gloves and eye protection. Ensure adequate ventilation during application and drying. In case of skin or eye contact, rinse immediately with clean water and seek medical advice if irritation persists. If swallowed, do not induce vomiting and seek medical attention immediately. For full health, safety, handling, and disposal information, refer to the relevant Safety Data Sheet (SDS).

5. STORAGE

Store IronPrime Metal Etch Primer in its original, unopened and tightly sealed containers in a cool, dry, well-ventilated area away from direct sunlight, heat, and frost, at temperatures between 5 °C and 35 °C; shelf life is approximately 12 months when stored as recommended.

6. IMPORTANT ADVISORY

IronPrime Metal Etch Primer is designed to function as an etching and adhesion-promoting primer within a compatible coating system. Final coating performance is dependent on correct surface preparation, application method, film thickness, curing conditions, and the suitability of subsequent coatings. For complete health, safety, handling, storage, and disposal information, refer to the relevant Safety Data Sheet (SDS).

7. DISCLAIMER

The information contained in this Technical Data Sheet is based on laboratory testing, industry knowledge, and practical application experience and is provided in good faith as a general guide. Product performance is dependent on factors beyond the manufacturer's control, including substrate condition, surface preparation, application method, environmental conditions, and workmanship. No guarantee or warranty of performance or suitability for any particular purpose is given or implied. The manufacturer shall not be liable for any direct, indirect, incidental, or consequential loss or damage arising from the use or application of this product. Product specifications may be amended without prior notice. It is the responsibility of the user to ensure that the latest version of this Technical Data Sheet is consulted prior to application.

Date of Issue: December 2025
Revision: V01