

HAMMERITE DIRECT TO RUST METAL PAINT HAMMERED AND SMOOTH

TECHNICAL DATA SHEET

Version 6 – 2020 APRIL

THIS ISSUE SUPERSEDES ALL PREVIOUS PUBLICATIONS

PRODUCT DESCRIPTION

Hammerite Direct To Rust Metal Paint is a single pack air-drying coating which delivers a decorative, corrosion resistant finish.

PRODUCT USES

- A corrosion-resistant and decorative coating for direct application to correctly prepared ferrous metals and correctly prepared and primed non-ferrous metals.
- **Hammerite Direct to Rust Metal Paint** is specially formulated to perform as a primer, undercoat and topcoat in one for ferrous metal. With DUALTECH it provides two-way protection by repelling water it limits surface damage, and by stopping rust forming underneath with its anti-corrosion formulation it, keeps the metal stronger for longer.

FEATURES AND BENEFITS

- Specialist formulation that can be applied directly to rust.
- Strong adhesion to ferrous metal surface
- 3-in-1 system that is easy to use on iron or steel.
- 8 year corrosion protection when applied as instructed for longer maintenance cycles.
- Water repellent to protect metal for longer.
- Ultra-tough and sag resistant
- Easier to apply – Longer wet-edge/working time = improved application properties especially on large surface
- Excellent weather resistance to protect against all weather conditions.
- **Hammerite Direct to Rust Metal Paint** is fast drying and capable of multi-coat application any time after 4 hours.
- The specially selected resins impart a gloss finish which resists dirt pick up.
- **Hammerite Direct to Rust Metal Paint** has excellent wetting properties making it tolerant to poorly prepared ferrous surfaces.

PRODUCT INFORMATION

Appearance

Smooth: a smooth gloss.

Hammered: a smooth gloss incorporating a hammered pattern (*pattern will vary depending on temperature, colour, substrate and method of application*).

Colour

Colours are matched to in-house colour standards and are not matched to BS 4800 or RAL standards.

Smooth: White, Black, Silver (Silver is a metallic finish).

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PRODUCT INFORMATION

Colour	Hammered: Black, Grey, Silver, Silver Grey, Gold, Bronze, Copper, Brown, Deep Green, Mid Green, Dark Blue, Light Blue, Red.
Colour Mixing	<u>Smooth</u> : can be intermixed – except for Silver. <u>Hammered</u> : can be intermixed though the pattern may be affected. Do not intermix <u>Hammered</u> and <u>Smooth</u> .
Binder Type	Synthetic Resins
Density at 23°C	Approx. 0.96 - 1.10 at 20°C depending on colour and finish
Packaged Viscosity	Viscosity at 25°C: 5.5 poise - 8.0 poise at 25°C (ICI cone and plate viscometer) depending on colour/finish.
Spreading Rate	Brush - Approx. 10m ² per litre per coat, depending on surface porosity, profile and application method. Aerosol – 0.5m ² for all coats applied
Recommended thickness	Wet (WFT) Min. 100µm, Dry (DFT) Min. 50µm. The number of coats required to achieve this will vary depending on substrate and method of application.
VOC Levels	Hammerite is conforms to EU Directive 2004/42/CE for VOC. The products shown above are classified as Category A/i 600g/l (2007) / 500g/l (2010) The product contains a max. 499g/l.
Flash Point	Flammable.
Adhesion	Excellent adhesion resistance. Passes ISO 2409, 7 days at 100 microns dry film thickness
Impact Resistance	Passes 20cm (face) ASTM2794, falling ball 1 kg at 7 days at 100 microns dry film thickness.
Temperature resistance	<u>Limits</u> Withstands minimum temperature of - 20°C Intermittent maximum temperature of 150°C (fully cured) It can withstand 80°C continuous heat once fully cured Notes: Colours may fade after prolong exposure at temperatures exceeding 50°C.
Service Limitations	Not suitable for use on equipment which may operate at 80°C or above. Not suitable for use in contact with drinking water of foodstuffs. Not suitable for permanent immersion.

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PRODUCT INFORMATION

UV resistance	Hammerite Direct to Rust Metal Paint will resist the effects of UV damage. Longevity could be reduced in hot climates or south-facing aspects where the extremes of UV and temperature are present. <u>Note:</u> All decorative alkyd based paints will fade or chalk when exposed to heat and UV radiation
Chemical resistance	Resists splashing by dilute acids/alkalis (10% dilution maximum), petrol and diesel when fully cured.
Corrosion resistance:	Passes 750 hours ASTM G85 Annex A5 at 100 microns dry film thickness ASTM D609, Type 2 A366 steel panels.

APPLICATION INFORMATION

Mixing	Lightly stir before use. Do not mix vigorously.
Application Surface conditions	Surface Temperature between 8 - 25°C. Maximum Relative Humidity between 10 - 85 %. Minimum application temperature: 3°C above dew point.
Application methods	Brush, roller, conventional spray, airless spray or aerosol.

Brush: Suitable for small flat areas and intricate wrought ironwork. Do not thin. Apply 2 coats to achieve recommended dry film thickness. Allow minimum 4 hours between coats. Ensure that all edges and corners are adequately covered. Do not over-apply, as sagging will occur.

- **Conventional Spray:** Suitable for large, flat and uneven surfaces.
N.B. The following products contain silicone, which affects the spraying of the product: Hammerite Hammered finish - all colours. Hammerite Smooth finish – gold, silver and copper.
Thin with **Hammerite Brush Cleaner & Thinner** at a ratio of 15% thinner to paint. Set spray gun at 25/35psi (approximately 2 Bar) and use full fan spray at maximum volume.
Apply 4 thin coats allowing approximately 1 hour between coats. Do not leave too long between coats as this could lead to wrinkles forming. The final coat should be sprayed heavily enough to flow to a glossy finish avoiding runs and sags.
Refer to spray equipment guidelines for the correct and safe use of sprayers. Shake spray gun before and during use to ensure an even colour.

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APPLICATION INFORMATION

Application methods - Continue

- Airless Spray.** If necessary thin with **Hammerite Brush Cleaner & Thinner** at a ratio of 15% thinner to paint. Fluid pressure: 2500 - 3000 psi (approximately 170 Bar). Nozzle size: 375-500 microns/0.015 - 0.020". Apply 2-3 coats, leaving each coat for a minimum of 1 hour or until it is touch dry before applying further coats. Shake spray gun before and during use to ensure an even colour.
- Aerosol.** Suitable for touch-up/small applications. Store aerosol at room temperature for 2 hours prior to use. Shake can vigorously for a full 3 minutes AFTER the agitator ball is heard. Use a vertical rather than a horizontal motion. Apply light even coats from a distance of approx. 25-30cm. To avoid runs and sags keep the aerosol moving. Do not concentrate the spray in any one spot. Several thin coats are recommended, particularly on intricate and vertical surfaces. Allow approx. 15 minutes between coats. To avoid blockages, invert the can and spray for 2 seconds between coats and after final use.

Thinner	Hammerite Brush Cleaner & Thinner if required for roller and spray application to maximum of 15% of product volume.
Drying Time	Surface Dry in 1 - 2 hours at 25°C.
Recoating/Inter-coat Time	4 hours at 25°C (drying times will be extended during cold, wet or humid conditions).
Cleaning of equipment	After use, remove as much product as possible, and then clean immediately with Hammerite Brush Cleaner & Thinner .
Substrates	Suitable for cast iron, mild steel, zinc, aluminium, stainless steel, chrome, brass, copper and galvanised iron surfaces. Machinery, railings, street furniture, structural steel work, shot, grit, and blasted steel.
Precautions:	Do not apply during cold (below 10°C) or wet weather. Special precautions should be taken to avoid inhalation of dust during surface preparation of pre-1960's paint surfaces over wood and metal as they may contain harmful lead.
Coats Required	Apply at least two coats to achieve the recommended minimum dry film thickness.

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APPLICATION INFORMATION

Trouble-shooting - How to Ensure Maximum Performance when Spray Finishing

Problem	Cause	Remedy
Colours or shade varies.	Pigment settling in gun.	Shake gun more frequently and apply further coats.
Rough, sandpapery appearance lacking gloss.	Paint drying too quickly. Gun pressure may be too high.	Check for blocked jets or air vents in container. Reduce gun pressure.
Excessive consumption.	Pressure too high causing "bounce". Conditions too windy.	Reduce gun pressure. Wait for still conditions.
Paint runs.	Excessive thickness in one coat.	If not too severe, wait 60 minutes and respray. If very bad, allow to full dry, and then level off with emery and re-spray.

Hammered Finish only

Pattern very small or no pattern at all.	Final coat too thin.	Apply a thicker coat.
Surface is uneven with pinholes or craters.	Temperature too low causing pattern drift.	Minimum recommended application temperature 10°C.

SURFACE PREPARATION

Ensure that surfaces are sound and free from dust, oil, grease, dirt, and debris. Surfaces must be thoroughly dry - no more than 12% moisture content.

Rusted Metal Surfaces:

- Minimum standard for adequate performance - St 2 (Swedish Standard SIS 05 59 00).
- This should be achieved by abrasion with coarse emery paper, wire brush or needle gun/grinder, where applicable.
- All surfaces must be dry and free from loose rust, dirt, dust, grease and salt.
- Extremely rough or pitted ferrous metals will benefit from the application of **Hammerite No. 1 Rust Beater** before using **Hammerite Direct To Rust Metal Paint**.

Bare New Ferrous Metal Surfaces:

Degrease with **Hammerite Brush Cleaner & Thinner**

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SURFACE PREPARATION

Painted Ferrous Metal Surfaces:

- Abrade the painted surface to remove contaminants/gloss.
- Wash down thoroughly with **Hammerite Brush Cleaner & Thinner**, a proprietary metal degreaser or diluted detergent both for removal of surface contaminants and soluble salts.
- Rinse with clean water and allow drying.
N.B. Test for compatibility with existing paint by painting a small test panel area first. Any compatibility problems will be evident within the first hour after application. If there is a reaction remove all paint by most suitable means back to bare metal before apply **Hammerite Direct to Rust Metal Paint** directly to the ferrous metal.

Shiny, Smooth Metal Surfaces:

- Extra abrasion is required to ensure maximum adhesion.
- Degrease with Hammerite Brush Cleaner & Thinner.

Unpainted/Bare Galvanised, Aluminium and Non Ferrous Metal Surfaces:

- Notes: In many areas, industrial and coastal districts in particular, soluble salts may contaminate the substrate. It is essential to scrub and rinse repeatedly with clean water to remove this contamination.
- To ensure maximum adhesion on aluminium and non-ferrous metal surfaces prime with **Hammerite Special Metals Primer** before applying **Hammerite Direct to Rust Metal Paint**.

HEALTH AND SAFETY INFORMATION

Solvent-based paint are flammable. Hammerite paints contains no added lead. Avoid contact with skin or eyes. Keep out of reach of children. If accidentally swallowed, seek medical advice immediately and show this container to the doctor. Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding should be used wherever possible.

If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used. Do not empty into drains or watercourses.

Ensure good ventilation during application and drying. It is recommended to use suitable protective clothing and equipment. To avoid the risk of spillage, always store and transport containers in a secure upright position. Refer to Material Safety Data Sheet for complete information.

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ADDITIONAL INFORMATION

Packaging	Tins: 250ml, 500ml, 1Lt, 5Lt. Aerosol: 400ml.
Storage Conditions	Store in a well-ventilated area below 25°C. <u>Tins.</u> Maximum two years at 21°C (70°F) stored in original unopened containers. Hammerite paint should be stored in a dry, well ventilated area. Protect from extremes of temperature, i.e. frost and strong sunlight. <u>Aerosol.</u> Maximum two years at 21°C (70°F) in original unopened containers. Pressurised container - protects from sunlight and do not expose to temperatures exceeding 50°C (120°F). Do not pierce or burn even after use.
Disclaimers	Colour references are as accurate as printing will allow. Please refer to the in-store stripe cards/standard card, or on-shelf colour displays for an accurate representation of the colour. Among others, the following factors may affect final colour appearance: product sheen and texture, colour and light reflections, application, surface texture and preparation. For best colour and sheen consistency, it is advisable to use containers of the same batch number, or to mix different batches together in a large container, or to finish in a corner before starting a new container Hammerite is intended for decorative applications and hence is not recommended for heavy industrial or high end performance coatings applications.

TDS STANDARD DISCLAIMER

The recommendations contained herein are given in good faith and meant to guide the specifier or user in accordance with good painting practices. They are gained from our tests and experiences and are believed to be accurate and reliable. No warranty/guarantee is implied by the recommendations contained herein since the conditions of use; application method, substrate and cleanliness of the substrate are beyond Dulux control.

Important Note; Technology may change with time, necessitating changes to this Technical Data Sheet (TDS).

It is the responsibility of the user to ensure that the latest TDS is being used for reference. Dulux Technical Data Sheets are available on our website www.duluxtrade.co.za or please contact: Dulux On-Line on 0860 330 111. Email ZA.Helpline@akzonobel.com

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