



TRADE WARMTOUCH

1. PRODUCT NAME

Thermilate TRADE Warmtouch.

2. PRODUCT DESCRIPTION

TRADE Warmtouch - air drying decorative coating for application to steel and other non-ferrous metals. When using for galvanised steel, special primer needed. The product uses an alkyd designed for general purpose high quality air-drying and force drying industrial finishes and exhibits properties of fast surface dry, excellent through dry in thick films, minimum yellowing. TRADE Warmtouch can be applied by brush, roller and spray. The specially selected resin imparts a semi-gloss finish which resists dirt pick up and insulates so its warm to touch and reduce energy lose. TRADE Warmtouch is designed to give excellent one coat coverage, but we recommend two coats for best insulation.

3. USE

As a decorative coating for galvanised and non-ferrous metals, certain plastics.

4. COLOUR RANGE

Available in Telegrey (RAL 7046), Traffic Blue(RAL 5017), Traffic Red(RAL 3020), Jet Black(RAL 9005), Traffic Yellow(RAL 1023), Pure White(RAL 9010) and Traffic Green(RAL 6024) - other RAL colours available.

5. SURFACE PREPARATION

Bare metal surfaces:

New galv should be weathered until dull before application of Thermilate Universal primer.

Painted metal surfaces:

- Abrade the painted surface to remove contaminants/gloss.
- Wash down thoroughly with Brush Cleaner & Thinners, a proprietary metal degreaser or diluted detergent both for removal of surface contaminants and soluble salts.
- Rinse with cleaner water.
- Allow to dry.
- Test for comparability with existing paint by painting a small test area first. Any compatibility problems will be evident within the first hour after application.

Shiny, smooth metal surfaces:

Preparation and treatment of corroded galvanised steel varies dependant on the severity of corrosion. Corrosion can be divided into 3 main categories as follow:

- Light White Rusting - this would appear as a light white powdery residue which typically forms during heavy rain. This can simply be brushed off using a bristle type brush then follow requirements for bare or painted metal as shown above.
- Moderate White Rusting - noticeable darkening and apparent etching of the galvanised coating would be visible. The area should be wire brushed to fully remove all white corrosion products. A thin film of Aluminium Paint should be applied with a cloth pad to blend the affected and unaffected areas before following requirements for bare metal as shown above.



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5. SURFACE PREPARATION (CONTINUED)

- Severe Rusting - heavy oxide deposits are evident under which the oxidised area might be almost black with possible signs of red rust. The affected area should be wire brushed to remove all oxidation products and rust then 1 or 2 coats of a zinc rich paint should be applied to a dry film thickness of 100 microns. A suitable primer would then be required before application of InsOpaint Warmtouch.

Unpainted Aluminium Ferrous Metal Surfaces:

- To ensure maximum adhesion on aluminium and non ferrous metal surfaces use Special Metals Primer for Thermilate or other good brand.
- 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.

6. RECOMMENDED FILM THICKNESS

- Minimum 100 microns wet.
 - Minimum 50 microns dry.
- One coat will normally be sufficient although additional coats may be required when applying over contrasting colours.

7. COVERING CAPACITY

Up to 14sq metres/litre for one coat at recommended dry film thickness (brushing). We recommend two coats.

4. FILM PROPERTIES

Please apply 2 coats and leave 4-6 hours between coats.

Minimum application temperature: 5°C above dew point
Ideal application temperature: 10-30°C (46-86°F)

9. APPLICATION METHODS

Brush - Suitable for small areas.

- Stir before use.
- One coat will normally be sufficient but additional coats may be required when applying over contrasting colours.
- Ensure edges and corners are adequately covered.

Roller - Suitable for larger flat areas.

- TRADE Warmtouch is designed to be ready for use therefore thinning is not recommended.
- The edges should be brushed in first and the remaining area's quickly filled in with the roller.
- For best results apply liberally using short, quick strokes.

Conventional Spray.

- Thinning of TRADE Warmtouch would contravene VOC regulation therefore it is Thermilate rules as a responsible company with respect to SHE issues, not to recommend application by conventional spray.

Airless Spray.

- Thinning not required.
- Fluid pressure: 2500 - 3000 psi (approximately 170 Bar).
- Nozzle size: 375-500 microns/0.018 - 0.020.
- Two coats will normally give full coverage but where additional coats are required over contrasting colours leave approximately 1 hour between coats or until it is touch dry before applying further coats.
- Shake spray gun before and during use to ensure an even colour.

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9. APPLICATION METHODS (CONTINUED)

How to ensure maximum performance when spray finishing.

Problem:	Cause:	Remedy:
1. Colours or shade varies.	Pigment settling in gun.	Shake gun more frequently and apply further coats.
2. Rough "sandpaper" appearance lacking gloss.		If not too severe wait 60 minutes and re-spray. If very bad, allow to full dry, level of with emery.
3. Excessive consumption.	Pressure too high causing "bounce". Conditions too windy.	3°C above dew point 8-30°C (46-86°F)
4. Paint runs.	Excessive thickness in one coat.	3°C above dew point 8-30°C (46-86°F)

10. DRYING TIME

Touch/Surface Dry	1-2 hours
Re-coat After	4-6 hours
Curing	24-48 hours

11. CLEANING EQUIPMENT

Use brush cleaner & thinner or white spirit.

12. SHELF LIFE AND STORAGE CONDITIONS

Minimum two years at 20°C (70°F) stored in original unopened containers. TRADE Warmtouch paint should be stored in a dry, well ventilated area. Protect from extremes of temperature, i.e. frost and strong sunlight. Stir well after long storage.

13. CORROSION RESISTANCE

Galvanised steel can be susceptible to white rust due to soluble salts therefore it is important during surface preparation to remove these using dilute detergent. Should the coating begin to corrode then refer to options detailed in section 6 (Rusted metal surfaces).

14. IMPACT RESISTANCE

Passes 15cm (face) BS3900, E7 falling ball 15"/lb 7 days at 50 microns dry film thickness.

15. CHEMICAL RESISTANCE

Resists splashing by dilute acids/alkalis (10% max), petrol, diesel and all common building materials when fully cured.

16. TEMPERATURE RESISTANCE

Limits: -20°C (-4°F) to 60°C (300°F) maximum intermittent when fully cured.
Note: Colours may fade after prolonged exposure at temperatures exceeding 50°C (120°F).

17. UV RESISTANCE

TRADE Warmtouch will resist the effects of UV damage. The UV resistance exposure time however could be reduced in hot climates or south facing aspects.

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18. ADHESION

Galvanised steel provides a difficult surface on which to achieve good adhesion. Good surface preparation will prevent most types of potential adhesion failure. The table below may be used as a guide to the causes of adhesion failure and the solution to avoid this occurrence before use of TRADE Warmtouch paint.

Cause of adhesion failure:	Remedy:
Surface contamination - oil and grease.	Degrease with dilute detergent
Formation of soluble salts (particularly applicable to weathered galv).	Abrade to remove
Corrosion of the zinc.	Refer to Section 6 - "For Rusted Metal Surfaces"
Etch primers or 'mordant' solution.	Only use phosphoric acid etch primer - other acid based primers do not cause adhesion failure but will affect the thickness of the galvanised coating.
Reaction between InsOpaint Warmtouch and zinc (formation of fatty acid soaps).	This is inevitable but sound surface preparation (degrease and abrade) and the selection alkyd for this product maximises the adhesive strength of the product. Prolonged performance will result from the use of Special Metals Primer.
Water - any flaws in the painted substrate (scratches etc) can allow water to get under the dry paint film to encourage lifting of the paint particularly where water is allowed to stand or pool on the surface.	Sound surface preparation will prevent the product coming off in sheets where this does occur. High risk surfaces should not be recommended for application with this product (flat roofs must be avoided).

19. VISCOSITY

5.0 poise - 8.0 poise at 25°C (cone and plate viscometer) depending on colour/finish.

20. SPECIFIC GRAVITY

0.90 - 1.16 at 20°C depending on colour/finish.

21. SERVICE LIMITATIONS

- Not suitable for use on equipment which may operate at 60°C or above.
- Not suitable for use in contact with drinking water or foodstuffs.
- Not suitable for permanent immersion.

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16. HEALTH, SAFETY & ENVIRONMENTAL INFORMATION

Water based paint. Safety data sheet available online at www.thermilate.com. Avoid the inhalation of dust and wear a suitable face mask if dry sanding. Take special precautions during surface preparation of pre - 1960's paint surfaces over wood and metal as they may contain harmful lead. For further information visit: www.direct.gov.uk/en/HomeAndCommunity/InYourHome/KeepSafeAtHome/DG_179814, EU limit value for this product (cat.A/a):75g/l (2007)/30g/l (2010). This product contains max 20-30g/l VOC.

See www.thermilate.com

VOC Content Low 0.30% - 7.99%. VOC's (Volatile Organic Compounds) contribute to atmospheric pollution.

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16. CODES ACCORDING TO THE LIST OF WASTES REGULATIONS

Non-hazardous product: waste code 08 11 12.

Part-used containers containing dried residue of supplied product assigned as non-hazardous: waste code 08 01 12.

Waste paint / varnish other than these mentioned: waste code 08 01 11. Used containers rinsed or scraped out with dried residue of the supplied product has non - hazardous waste code 05 01 02 plastic packaging, or non-hazardous waste code 15 01 04 metal packaging.

Rigorously scraped out - removing maximum amount of product from the container by physical or mechanical means such as draining or scraping, to leave a residue that cannot be removed by such means.

These assigned codes are based on the actual composition of the product in both supplied and dried residues. If mixed with other wastes, these waste codes quoted may not be applicable.



Prepared by Thermilate Technologies Ltd

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This Product Data Sheet supersedes all other previously dated sheets for this product.