GALVIT® ES510

P42.01

Description

- A two-pack, moisture curing, zinc rich, ethyl silicate primer/finish.
- Zinc in dry film 71% by weight.

Product Characteristics

- Liquid A and B packs.
- Provides cathodic protection to steel.
- Good impact and good abrasion resistance.
- Excellent resistance to a wide range of chemicals (refer to I-19 Wattyl Tank Lining Resistance Guide for a full list of suitable cargoes).
- Must not be used for immersion or splash in alkaline (more than pH 9) or acidic (less than pH 5) liquids.
- To be used as a system primer in various paint systems based on unsaponifiable binders.
- Can withstand substrate temperatures up to 400°C, under normal atmospheric exposure conditions.
- Can be used as a single coat primer/finish.

Colours and Gloss

- Grey – flat.

Recommended Film Thickness (Per Coat)

	Minimum	Maximum	Typical
Dry film thickness (µm)	60	90	75
Wet film thickness (µm)	92	138	115
Theoretical spreading rate (m^2/l)	10.9	7.2	8.7

Basic Data at 25°C / 80% Relative Humidity

Solids content approx.	65% by volume
Mix ratio	3A:2B by volume
Touch dry after	15 minutes
Overcoating interval	Refer to overcoating table
Full cure	24 hours

- Zinc rich primers form zinc salts on the surface. At all times, any visible surface contamination and zinc salts must be removed before overcoating by high pressure potable water cleaning (min. 30 MPa/4000 psi), wet abrasive blasting, sweep blasting or mechanical cleaning.

Surface Preparation

- All surfaces to be coated must be clean, dry and free from chalking and contamination.
- Oil and grease should be removed from all surfaces in accordance with AS 1627.1 solvent cleaning.

MILD STEEL

- Blast clean in accordance with AS 1627.4 to Sa 2½ minimum (AS 1627.9), surface profile 40-70 microns.
- If oxidation occurs between blasting and application, the surface should be re-blasted to the specified visual standard.
- Surface defects revealed by the blast cleaning process should be ground, filled or treated in the appropriate manner.
- Substrate temperature must be at least 5°C during surface preparation, application and curing and at least 3°C above dew point.
- A heavily pitted steel substrate is not acceptable.
- Substrate temperatures ranging from 5°C up to 40°C are acceptable.
- Relative humidity should be above 60%.

Application Instructions

- Mixing ratio by volume: zinc paste to liquid binder - 3A:2B.
- Mix with Galvit ES510/ES600 Part B only.
- Induction time – none.
- Pot life at 25°C 8 hours. Do not use after this time even if the mix is still liquid.
- Stir the paste thoroughly before adding the binder.
- Add gradually one third of the binder to the zinc paste.
- Stir thoroughly until homogeneous.
- Add remaining binder and continue stirring until the mixture is homogeneous.
- The temperature of the mixed product should be above 15°C.
- Thinner should only be added after mixing the components.
- Freshly catalysed material should not be added to product that has been mixed for some time.
- Agitate continuously during application.
- At an application temperature above 30°C addition of max. 10% by volume of Thinner L748 may be necessary to avoid dry spray.
- Wattyl recommends the use of coating inspection reports in compliance with AS/NZS 3894.10,11,12 refer to Information Sheet I-20 for more information.
- For recommendations outside those contained in this data sheet, refer to Wattyl.

Application Methods

	AIRLESS SPRAY	AIR SPRAY	BRUSH/ ROLLER
Recommended thinner	Thinner L760	Thinner L760	Thinning not necessary
Volume of thinner	0-10%	0-10%	• The maximum dry film thickness that can be achieved when brushing/rolling is 50 microns. • Multiple coats may be required to achieve the
Tip	0.43-0.64mm (0.019-0.025 inch)	1.8-2.0mm (0.071-0.078 inch)	
Fluid/ Atomised pressure	15 MPa (2100 psi)	0.3 Mpa (50 psi)	
Pump	30:1	-	

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Hose	⅜" ID (9.5 mm)	-	recommended dry film thickness.

CLEANING SOLVENT | Thinner L760

Safety Precautions

- Flammable. Avoid contact with heat and naked flame.
- Avoid contact with skin and eyes.
- Use gloves, mask and goggles during application.
- Provide adequate ventilation when using in confined spaces.
- Zinc paints may develop pressure on storage, open containers carefully.
- Provide adequate ventilation when cutting or welding this product due to harmful zinc fumes.
- This product is intended for use in industrial situations by professional applicators in accordance with the advice given on this sheet. All work involving the use and application of this product should be carried out in compliance with all relevant Health, Safety & Environmental standards and regulations and must not be used without reference to the safety data sheet (SDS).

Additional Data

SURFACE PREPARATION OF GALVIT ES510 BEFORE OVERCOATING

- Zinc rich primers can form zinc salts on the surface and these must be removed before overcoating.
- Zinc rich primers should NOT be weathered for long periods before overcoating.
- In Industrial and Marine Conditions, the overcoating interval should be reduced to the practical minimum.
- Before overcoating, zinc salts, chalking and all other forms of visible surface contamination must be removed by high pressure (30 MPa/4,000 psi) potable water cleaning, wet abrasive blasting, sweep blasting or mechanical cleaning.
- To prevent zinc salt formation and surface contamination where very long overcoating intervals are required, it is recommended to overcoat Galvit ES510 within two days with Epinamel PR250.

OVERCOATING TABLE

Minimum and maximum overcoating intervals with Galvit ES510.

Interval	Humidity	5°C	15°C	25°C	35°C
Min	<60%	>7 days	>4 days	>48 hrs	>32 hrs
	60%	7 days	4 days	48 hrs	32 hrs
	80%	4 days	2 days	24 hrs	16 hrs
	>80%	<4 days	<2 days	<24 hrs	<16 hrs
Max	Unlimited when free from zinc salts and contamination (See surface preparation notes)				

- Galvit ES510 requires moisture for curing.
- Galvit ES510 should have full cure before overcoating; relative humidity and temperature should be measured during curing to determine the overcoating time.
- To reduce the curing time of Galvit ES510, allow a 4-hour flash-off time, wet the surface by spraying with fresh water and keep wet for the next 4 hours. Test for full cure after this time to determine if a further wet exposure period is required.
- Curing will be retarded at low humidities. For relative humidities less than 60%, test for full cure before overcoating.
- Galvit ES510 can be tested for full cure using a solvent rub test. The coated surface should be rubbed with a cloth soaked in methyl ethyl ketone for determination of cure (refer AS 3894.4/ASTM D4752).
- To avoid possible solvent popping effects (pinholes) when recoating, Galvit ES510 must be sealed with Epinamel PR250 or a thinned first coat of high solids epoxy (refer to Information Sheet I-16 for more information).

CURING AND POTLIFE TABLE

Paint temperature	Humidity	5°C	15°C	25°C	35°C
Dry to handle[1]	-	5 hrs	2 hrs	1 hrs	45 mins
Full cure	<60%	>7 days	>4 days	>48 hrs	>32 hrs
	60%	7 days	4 days	48 hrs	32 hrs
	80%	4 days	2 days	24 hrs	16 hrs
	>80%	<4 days	<2 days	<24 hrs	<16 hrs
Potlife (at applicable viscosity)	-	-	12 hrs	8 hrs	4 hrs

*Adequate ventilation must be continuously maintained during application and curing.
[1] this is a guide only, drying time is temperature, humidity, and film dependent.

Precautions

- For recommendations outside those contained in this data sheet, refer to Wattyl.

Product Compatibility

PRIMERS – N/A

TOPCOATS

- Epinamel PR250
- Epinamel DTS680
- Epinamel DTM985

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Storage and Packaging

- Shelf life at least 12 months.
- Part B maximum 6 months from the date of manufacture, refer to label for expiry date. The shelf life may be extended by the Technical Manager following QC testing; please contact your Wattyl representative if an extension is required.
- All components shall be stored in a dry internal environment at between 5°C and 35°C.
- Packaging: 12.5 litre kit (7.5 litre Part A, 5 litre Part B).
- Product line: 201431.015 (Part A)
  201433.005 (Part B)

For the most up to date information, please visit our website at www.wattylpc.com.au, or contact us at Australia 132 101 (Australia) 0800 825 7727 (New Zealand).

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