



Maintenance Schedule for Tray-dec Floors

Where exposed to the elements, galvanised metal decking used for composite flooring systems should be washed regularly to avoid early consumption of the metallic coating.

It is recommended that the exposed area of metal floor is washed using high pressure water blasting every six months. Visual inspection should be carried out every year and if any corrosion is detected this should immediately be repaired.

Where galvanised metal decking is used for composite flooring systems on internal floors, the metal decking

should be inspected annually as part of the routine building maintenance programme.

Where any damage to the metal coating is detected this should be immediately painted to prevent corrosion of the base metal. We recommend using Resene Armourcote 510 High Solids Epoxy for treatment of the deck.

Refer to BlueScope Steel durability statement Rev 4, February 2004 for further information. Where the underside is not exposed then no maintenance should be required.



Resene Armourcote 510

High Solids Epoxy

Resene Armourcote 510 is a high performance, self-priming epoxy mastic combining superb adhesion with true barrier properties. Will tolerate compromised surfaces such as handcleaned steel.

Typical uses

- Bridges
- Chemical plants
- Concrete surfaces
- Food processing
- Plants
- Power plants
- Pulp and paper plants
- Repaints
- Structural steel
- Tank exteriors
- Waste/water treatment plants

Information contained in this Data Sheet is re-validated every two years following issue date. Please ensure the current Data Sheet and Material Safety Data Sheet are consulted prior to specification or application of product. If in doubt contact Resene.

Physical properties

Vehicle type	Two component epoxy
Hardener	Polyamide/amide
Pigmentation	Chemically resistant
Pot life	1-2 hours at 21°C (standard hardener)
Mix ratio	1:1 (by volume)
Finish	Semi-gloss
Colour	Off-white, selected BS2660, BS5252 and Resene Total Colour System
Dry time (through)	16-24 hours at 21°C
Recoat	Minimum 24 hours with standard hardener Maximum varies with environmental conditions and topcoat
Primer required	Not normally, however can be applied over Resene Armourzinc 125 (see Data Sheet RA24), Resene ArmourZinc 120 (see Data Sheet RA22), Resene Zincilate 10 (see Data Sheet RA20), Resene Zincilate 11 (see Data Sheet RA21) or inhibitive primers
Theoretical coverage	6.9 sq. metres per litre (125 microns DFT) 4.3.sq. metres per litre (200 microns DFT)
Volume solids	86%
Recommended DFT	125-200 microns per coat
Usual no. of coats	1
Abrasion resistance	Excellent
Solvent resistance	Good
Heat resistance	Up to 90°C (dry, continuous)
Chemical resistance	Acids – fair; alkalis – excellent
Thinning and clean up	Thin with Resene Thinner No.6 Clean up with Resene Thinner No.12
Pack size	4 and 20 litre composites
VOC	104 grams per litre mixed

Performance and limitations

Performance

1. Self-priming finish coat that is tolerant of minimum surface preparation.
2. May be applied over previously painted, or prepared rusty surfaces, or both.
3. Dry film thickness up to 200 microns per coat can be achieved with airless spray application.

Limitations

1. Will chalk when continuously exposed to sunlight and UV light. This chalking in no way impairs the coating's performance. Chalking can be prevented by overcoating with a pigmented Resene Uracryl Series 400 topcoat.
2. Cure time and pot life are affected by temperature. For application below 10°C use Resene Armourcote 510 L.T Cure and Resene Thinner No.6; above 35°C use Resene Alumastic hardener and Resene Thinner No.11.
3. Not recommended for immersion in acids, alkalis or solvents.
4. Do not apply over thermoplastic coatings.
5. Not available in pure white.
6. Extended cure times are required before immersion service.

Armourcote 510 High Solids Epoxy

Surface preparation

Concrete

If oil or grease deposits are present degrease according to SSPC SP1 solvent cleaning. Leave new concrete to cure for a minimum of 28 days before painting. Concrete floors must be profiled by captive blasting, abrasive blasting, diamond grinding, or acid etching (see [Data Sheet D83](#)). Prepared surface must have a uniform surface texture exposing the aggregate resembling 180 grit sandpaper. If this is not achieved repeat profiling method until the required surface texture is achieved.

Concrete surfaces cured with curing compounds or contaminated with form oils must be completely cleaned by abrasive blasting. Acid etching is not acceptable as this procedure will not normally remove these compounds. After etching or abrasive blasting, fill holes, voids, etc by application of Resene Epox-O-Bond (see [Data Sheet D808](#)).

Galvanising

Remove oil and grease with Resene Roof Wash and Paint Cleaner (see [Data Sheet D88](#)) or Resene Emulsifiable Solvent Cleaner (see [Data Sheet D804](#)). Wash with copious amounts of freshwater. Allow to dry.

Repaints

Ensure all surfaces to be painted are dry and free from loose rust, dirt, dust, oil, grease and mould. When applying Resene Armourcote 510 over an existing coating system, a TEST PATCH IS RECOMMENDED to ensure compatibility.

Steel

Remove all loose rust, dirt, grease and salt deposits. Power tool clean to SSPC SP3 or hand tool clean to SSPC SP2. For severe environments, dry abrasive blast to a minimum of SSPC SP6 (Sa 2) and apply a Resene Zincilate (see [Data Sheets RA20, RA20A, RA21](#)) or Resene ArmourZinc primer (see [Data Sheets RA22, RA23, RA24](#)). For continuous immersion in fresh or salt water dry abrasive blast to achieve a minimum SSPC SP5 (Sa 3).

Residues and dust from old paint systems containing lead or chromate may be dangerous to the health of the operator and the environment. Ensure approved procedures are put in place to safeguard against this.

Application

Mixing

Base and hardener are mixed in a 1:1 ratio (by volume). Stir contents of each container separately using an explosion-proof mixer. Add total contents of hardener container to total contents of base. Mix thoroughly until uniformly blended.

Application

Airless spray - Standard airless equipment with a 30:1 or higher pump ratio and a 17 to 21 thou fluid tip is recommended. A small amount of thinner greatly reduces viscosity. Excessive thinning will cause running or sagging. If required judiciously thin with Thinner No.6 to improve atomisation.

Apply a wet coat in even parallel passes overlapping each pass 50% to avoid holidays, pinholes and bare areas. Give special attention to welds, seams and sharp profiles. When applying Resene Armourcote 510 directly over inorganic zinc, zinc rich primers or porous surfaces, apply a mist coat of thinned product to minimise bubbling. Small areas can be touched up by brush but the high level of thinning required for brush application reduces desirable high build properties.

Safety precautions

Consult Material Safety Data Sheet for this product prior to use. Users should ensure that they are familiar with all aspects concerning safe application of this product. IF IN DOUBT, DO NOT USE THIS PRODUCT.

Information contained in this Data Sheet is re-validated every two years following issue date.

Please ensure current Data Sheet is consulted prior to specification or application of Resene products.

If the surface you propose to coat is not referred to by this Data Sheet, please contact Resene for clarification.

CORROSION

CONCRETE DECKING

TECHNICAL BULLETIN CTB-23

Rev 4, February 2004

This issue supersedes all previous issues

The use of galvanised products for the formation of profiled concrete formwork decking which is permanently placed prior to pouring the reinforced concrete slab has been a common building practice within Australia for over 20 years. Galvanized material is well suited to applications involving contact with concrete slurries and the mild etching that the highly alkaline mix initiates. This leads to superior bonding with the galvanized deck.

However, there are four areas that are of direct concern with regard to possible corrosion. These are:

Firstly, corrosion can result from poor detailing and positioning of the concrete reinforcing components, the positioning of the structural reinforcing steel or the positioning of expansion joints. The poor performance of any of these components will lead to the penetration of water through exposed concrete decks causing premature failure of the supporting galvanized structural deck and any associated structural steelwork.

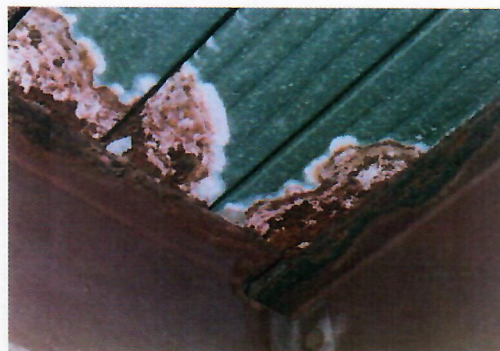
Secondly, corrosion of the bottom surface of the deck is also possible where the decking either constitutes a severely unwashed area, is placed in a severe environment or is placed at distances closer than 450 mm to moist soil.

Characteristic unwashed area corrosion mechanisms, will lead to the early consumption of the metallic coating in severe marine and other severe environments. Heavy coating mass galvanized material should be considered for use in such environments and further post painting of the decking with a high build industrial coating system may be required.

Thirdly, incorrect edge detailing will lead to the direction of run off waters from the slab surface into the shrinkage gap between the edge of the supported concrete slab and the structural steel decking. This will lead to corrosion of the galvanized component of the decking at the interface and possibly, the loss of structural requirements.

Finally, in all cases where studs are to be welded to structural steel beam, the surface in contact with the steel decking should be coated with a weld-through primer of an appropriate thickness (25 μ). This is to prevent dissimilar metal corrosion of the galvanized steel decking. Given the difficulty of rectification, subsequent to installation, it is strongly recommended that this practice be followed.

Figure 1: Corroded concrete decking showing the result of sub-standard expansion joint and finish detail.



ZINCALUME® zinc/aluminium alloy-coated steel is not recommended for concrete decking as formwork. While ZINCALUME® steel is resistant to corrosion in most atmospheric environments it is rapidly attacked by the alkaline concrete mix and must not be selected for this end use.

The information and advice contained in this Bulletin is of a general nature only, and has not been prepared with your specific needs in mind. You should always obtain specialist advice to ensure that the materials, approach and techniques referred to in this Bulletin meet your specific requirements.

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