

COATING SPECIFICATION

REPAIR AFTER GALVANISING

COATING SPECIFICATION: H1

ISSUE: 4

DATE: FEBRUARY 2023

1.0 SCOPE

The intent of this document is to summarise the procedures for touch up, localised repairs of new galvanised structures with brush application of a 2 pack zinc rich epoxy or single pack zinc rich primer. If the aesthetic appearance of repair is important, the repair area can be top coated with a single pack enamel spray in “silver frost/aluminium” colour.

Refer AS/NZS 4680 – Hot-dip galvanized (zinc) coating on fabricated ferrous articles Section 8 for further information on repair after galvanising.

2.0 PURPOSE

The purpose of this coating specification is to repair of new galvanised structures.

3.0 DEFINITIONS

ACA: Australasian Corrosion Association.

Contractor: the service provider or its sub-contractor who will undertake the works.

Corporation: the Water Corporation and the Principal for the purposes of externally contracted asset delivery.

DFT: Dry Film Thickness.

ITP: the detailed Inspection and Test Plan(s) for the Works.

NACE: National Association of Corrosion Engineers.

Superintendent: The Superintendent for the contract, as defined in the conditions of contract, who is appointed by the Water Corporation to manage/oversee the work under the contract on behalf of the Water Corporation.

Works: The surface preparation, coating application and inspection to be undertaken by the Contractor to which this coating specification applies.

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4.0 SURFACE PREPARATION

- 4.1 Oil or dirt shall be removed by solvent cleaning or other approved methods.
- 4.2 The prepared surface shall be free from oxides and power tool cleaned in accordance to AS 1627.2.
- 4.3 Coating shall not be applied to surfaces which have become contaminated or have deteriorated after preparation.

5.0 COATING MATERIALS

- 5.1 Coating materials used for attaining the specified standard shall be Zinc Rich Epoxy (ZRE) in accordance with Appendix 3 of DS-95- commonly used coatings in potable water and wastewater infrastructures, unless approved otherwise by the Principal. This approval is required before coating commences.
- 5.2 The coating components shall be thoroughly mixed in the specified proportions. Material so prepared shall be used within the “pot-life” period claimed by the manufacturer for the relevant site conditions.
- 5.3 Coating specifications inclusive of list of items, datasheets, coating application, method statements and ITP’s shall be submitted to the Principal for approval at least 10 working days prior to commencement of the work.
- 5.4 Minimum/maximum recoat window shall be in accordance with manufacturer’s recommendation.

6.0 ATMOSPHERIC CONDITIONS

- 6.1 Prior to and during coating application, the Contractor shall record details pertaining to environmental conditions including ambient and surface temperature, relative humidity and dew point.
- 6.2 Coating application shall not commence if any one of the following conditions exists:
 - The relative humidity is above 85%;
 - The substrate temperature is less than dew point plus 3°C;
 - The substrate temperature is below 10°C;
 - The substrate temperature is above 55°C;
 - The surface to be coated is wet or damp;
 - Where the full prime coat application cannot be carried out before the

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specified cleanliness of the surface deteriorates;

- If the weather is deteriorating or is unfavourable for application or curing;
- If the pot life of the paint has been exceeded.

7.0 COATING THICKNESS

- 7.1 Application of the coating materials to the surfaces specified shall be in accordance with the coating manufacturer's recommended practices.
- 7.2 Brush apply 2 coats of an approved two pack zinc rich epoxy or single pack zinc rich primer to 100 microns minimum dry film thickness.
- 7.3 When directed by the Superintendent or situations where the aesthetic appearance is deemed important, the Contractor shall top coat the repair to blend into existing galvanising, using three passes of a single pack enamel spray in "silver frost/aluminium" colour.

8.0 COATING FINISH

- 8.1 The finished coating shall be of uniform thickness, colour, appearance and gloss. It shall be fully cured, insoluble, adherent, coherent and free from holidays, laps, sags, blistering, checking, wrinkling, overspray, patchiness and any other defects that may impair the performance and/or appearance of the coating.

9.0 INSPECTION AND TESTING OF COATING

- 9.1 Finished coating thickness shall be determined using suitable instruments standardised (zeroed) on a smooth uncoated metal plate in accordance with AS 3894.3.

10.0 REPAIR OF A DEFECTIVE COATING AND RETESTING

- 10.1 Defects such as pinholes, cracks, blisters, voids, foreign inclusions and irregular profile peaks shall be marked for repair and retested upon full cure of the repaired coating.
- 10.2 To supplement these records, prior to any works commencing, an Inspection Test Plan (ITP) shall be forwarded to the Corporation for review a minimum of ten working days prior to the commencement of work.

11.0 CONTRACTOR'S RESPONSIBILITY

- 11.1 The Contractor shall supply all necessary plant, equipment, materials and labour, prepare the surface and apply and maintain the protective coating in accordance with this specification

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11.2 The preceding inspection clauses shall not relieve the Contractor of their responsibility to supply materials and perform work in accordance with the requirements of any overriding contract documentation.

Document Revision History					
Sect	Issue	Date	Revision Description	RVWD	APROV
1	4	09/02/2023	Amend scope	AO	SS
5	4	09/02/2023	Amend Coating Materials	AO	SS
9	4	09/02/2023	Amend inspection and testing of coating	AO	SS

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