COATING SPECIFICATION

ANTI-GRAFFITI COATING ON STEEL, CAST IRON, GALVANISED STEEL AND SINTAKOTE® STRUCTURES

COATING SPECIFICATION: J1 **ISSUE: 4** **DATE: MARCH 2023**

1.0 SCOPE

This document summarises the coating procedure for the application of an "Anti-graffiti" topcoat, if required to replace the specified polyurethane topcoat in Water Corporation coating specifications C2, C4, E3, E4, and E5.

Refer Design Standard, DS 95 (Standard for the Selection, Preparation, Application, Inspection and Testing of Protective Coatings on Water Corporation Assets) for additional information or clarification.

2.0 PURPOSE

The purpose of this coating specification is to provide guidance on the application of anti-graffiti coating on exterior services of steel, cast iron, galvanised steel and Sintakote® structures in potable and wastewater applications.

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.

4.0 COATING MATERIALS

4.1 Appropriate anti-graffiti coating system shall be selected in accordance with DS 95 Appendix 3 - Commonly Used Coatings in Potable Water and Wastewater Infrastructures. Any alternative coating system shall require written approval from the Principal prior to commencement of coating work.

4.2 The coating components shall be thoroughly mixed in the specified proportions as per manufacture recommendations.

4.3 Coating specifications inclusive of datasheets, coating application, method statements and ITPs shall be submitted to the Principal for approval at least 10 working days prior to commencement of the work.

4.4 Recommended drying times between coats for on-site conditions by the coating manufacturer shall not be exceeded.

5.0 COATING THICKNESS

5.1 Finished coating thickness for anti-graffiti top coat shall be a total DFT of 100 microns, which is comprised of 2 coats of 50 microns nominal dry film thickness.

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

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;
- The specified cleanliness of the surface deteriorates;
- If the weather is deteriorating or is unfavorable for coating application and/or curing;
- If the pot life of the paint has been exceeded.

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7.0 COATING FINISH

7.1 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.

8.0 CARE AND MAINTENANCE OF FINISH COAT

8.1 When performing any cleaning activity on the coating surface that requires use of volatile solvents or strong cleaning agents, the contractor must ensure that there is adequate ventilation and appropriate PPE must be worn. Refer to appropriate graffiti remover data sheet supplied by respective paint manufacturer.

9.0 COATING APPLICATOR/PERSONNEL QUALIFICATION

9.1 Work shall only be carried out by a competent person.

9.2 The work shall be undertaken by an approved Water Corporation Protective Coating and Concrete Repair Services panel member unless approved otherwise by the Principal.

9.3 The contractor shall nominate a certified coating inspector to perform inspections and maintain appropriate records for the work performed. The coating Inspector engaged in testing, monitoring, and verification of surface preparation and coating application shall hold relevant inspection qualifications and current certifications (e.g. NACE or ACA) or approved by the Principal. The coating inspector shall conduct the following:

- Prepare Quality Assurance documentation to meet the specified standards given herein and the required acceptance criteria.
- Perform inspections and maintain appropriate records for work performed.
- Testing, monitoring, and verification of surface preparation and coating application.

10.0 INSPECTION AND TESTING OF COATING

10.1 Coatings shall be visually examined for surface defects and any discontinuity arising after curing shall be recorded. The results of this test shall be submitted to the Superintendent.

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11.0 REPAIR OF A DEFECTIVE COATING AND RETESTING

11.1 Coatings with the defective areas equal to 20% or more of the total coated surface, will be rejected outright.

11.2 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.

12.0 RECORDING AND REPORTING

12.1 Following testing a report shall be submitted by the Contractor. The Contractor shall keep detailed records and reports including the following:

- Environmental conditions (relative humidity, dew point etc.);
- Surface preparation;
- Coating application;
- Coating testing; and
- General failure.

12.2 These records, including the Inspection Test Plan (ITP) shall be forwarded to the Corporation on completion of works.

13.0 CONTRACTOR'S RESPONSIBILITY

13.1 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.

13.2 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**
4	4	20/03/2023	Amend materials	AO	SS
9	4	20/03/2023	Amend coating applicator/personnel qualification	AO	SS
10	4	20/03/2023	Amend inspection and testing coating	AO	SS

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