1.0 SCOPE

This document summarises the coating procedure to protect external surfaces of concrete structures by application of one coat of epoxy concrete sealer followed by “Anti-graffiti Polyurethane” top coat.

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.

It shall be read in conjunction with Water Corporation surface preparation specification A5 - Surface Preparation for the application of Protective Coatings on Concrete.

2.0 PURPOSE

The purpose of this coating specification is to provide guidance on the application of anti-graffiti coatings to the external surfaces of concrete tanks and other concrete structures which are susceptible to graffiti.

3.0 DEFINITIONS

| 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. |
| TDFT: | Total Dry Film Thickness. |
| Works: | The surface preparation, coating application and inspection to be undertaken by the contractor to which this coating specification applies. |
COATING SPECIFICATION

ANTI-GRAFFITI COATING ON OLD AND NEW CONCRETE STRUCTURES

COATING SPECIFICATION: J2 ISSUE: 3 DATE: JULY 2019

4.0 SURFACE PREPARATION

4.1 Follow paint supplier’s recommendation for minimum concrete curing time before commencement of preparation.

4.2 All visible contaminations dirt, oxides, paint and other foreign matter shall be removed from the surfaces to be coated by preferably low pressure water wash for new structures. Follow the paint manufacturer recommendation for water wash pressure.

4.3 Surface dampness shall be in accordance to the paint manufacturer’s practice prior to painting.

4.4 The prepared surfaces shall have a uniform textured appearance, a surface profile that provides satisfactory anchorage for the coating, and be otherwise compatible with the coating to be applied.

4.5 All crevices holes and cracks shall not be filled with putty or any other substance. This is to allow the concrete to breathe and remain permeable to water evaporation.

4.6 Coating shall not be applied to surfaces, which have become contaminated or deteriorated after cleaning.

5.0 COATING MATERIALS

5.1 Coating materials used for attaining the specified standard shall be selected in accordance with Appendix 3 of DS-95- commonly used coatings in potable water and wastewater infrastructures unless approved otherwise by the Team Leader – Asset Durability. This approval is required before coating commences.

5.2 The coating components shall be thoroughly mixed in accordance with manufacturer’s recommendation before commencing application. Material so prepared shall be used within the ‘pot-life’ period as specified by the manufacturer.

5.3 Recommended drying times between coats for on site conditions shall not be exceeded.

6.0 COATING THICKNESS

6.1 Apply one coat of Epoxy Concrete Sealer to a nominal dry film thickness of 125 microns followed by two coats of “Anti-Graffiti Polyurethane” of 50 microns each, to produce total nominal dry film thickness of 225 microns.
COATING SPECIFICATION

ANTI-GRAFFITI COATING ON OLD AND NEW CONCRETE STRUCTURES

COATING SPECIFICATION: J2 ISSUE: 3 DATE: JULY 2019

7.0 ATMOSPHERIC CONDITIONS

7.1 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.

8.0 PAINT COLOUR

8.1 Protective coatings colour shall comply with AS 2700 - Colour Standards for General Purposes. If a suitable approved colour is not available, then the proposed colour shall be referred to the Water Corporation for acceptance prior to use.

9.0 COATING FINISH

9.1 The finished coating shall be of uniform thickness, colour, appearance and gloss. It shall be adherent, coherent and free from sags, blistering, checking, wrinkling, overspray, patchiness and any other defect that may impair the performance and/or appearance of the coating.

10.0 CARE AND MAINTENANCE OF FINISH COAT

10.1 Refer Graffiti Eraser data sheet supplied by paint manufacturer. When performing any cleaning activity which requires the use of volatile solvents or strong cleaning agents, always ensure that there is adequate ventilation and appropriate PPE are worn.

11.0 COATING APPLICATOR/PERSONNEL QUALIFICATION

11.1 Work shall only be carried out by competent personnel.

11.2 The work shall be undertaken by an approved Water Corporation Corrosion Control Panel Services member, unless approved otherwise by the Team Leader – Asset Durability.

11.3 Surfaces to be coated which will become inaccessible after assembly or erection shall be cleaned and painted before they become inaccessible.

11.4 The Applicator’s Coating Supervisor shall possess as a minimum one of the following certifications:

- ACA - Corrosion Inspector; or
- NACE - CIP Level I Coating Inspector.
The coating contractor shall nominate a Coating Inspector as their Quality Control Officer to carry out inspections, submit the ITP, undertake the required testing and maintain appropriate records for all work performed.

The Applicator’s Coating Inspector shall possess as a minimum one of the following certifications:

- ACA - Coating Inspector; or
- NACE - CIP Level I Coating Inspector.

**12.0 INSPECTION AND TESTING OF COATING**

12.1 Coatings shall be visually examined for surface defects and any discontinuity arising after curing shall be recorded.

12.2 The results of this test shall be submitted to the Superintendent along with the ITP, other relevant product information and coating application procedures for review a minimum of 10 days prior to commencing work.

**13.0 REPAIR OF A DEFECTIVE COATING AND RETESTING**

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

13.2 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.

**14.0 RECORDING AND REPORTING**

14.1 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;
- Surface profile;
- Coating application;
- Coating testing; and
- General failure.

14.2 To supplement these records, prior to any works commencing, an Inspection Test Plans (ITP) shall be forwarded to the Water Corporation for review a minimum of ten working days prior to the commencement of work.
15.0 CONTRACTOR'S RESPONSIBILITY

15.1 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.

15.2 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.