COATING SPECIFICATION

EPOXY MASTIC, POLYURETHANE TOP COAT ON FUSION BONDED POLYETHYLENE COATING (SINTAKOTE®)

COATING SPECIFICATION: E5 ISSUE: 5 DATE: APRIL 2026

1.0 SCOPE

This document summarises the procedure for the application of a 2 pack epoxy mastic coating, followed by a polyurethane top coat, onto a fusion bonded medium density polyethylene (Sintakote®) coating. **This coating system only applies for above ground uses.**

Refer Design Standard, DS95 (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 **A7 - Surface Preparation and Application of Protective Coating on Fusion Bonded Medium Density Polyethylene (Sintakote®)**.

Note:

If anti-graffiti properties are required, replace the specified topcoat with 2 coats of 50 microns nominal dry film thickness "Anti-graffiti Polyurethane" with a total thickness of 100 microns as described in Coating Specification J1.

2.0 PURPOSE

This coating is used on external surfaces of Fusion Bonded Medium Density Polyethylene (Sintakote®) coated pipe exposed to **atmospheric corrosivity categories C1 to C5** as described in Australian Standard AS 2312.

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.

AMPP: The Association for Materials Protection and Performance

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

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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.

4.0 SURFACE PREPARATION

4.1 Remove any grease, salts, or oil deposits. Sweep blast the surface using garnet to provide a suitable key for the coating system to adhere. Care should be taken to prevent "excessive scuffing" to the Fusion Bonded Polyethylene material. If sweep blasting cannot be achieved, roughening of the surface by sanding is permitted.

4.2 Sintakote® sections that are not required to be coated shall be protected with masking materials that are not detrimental to the integrity of Sintakote® coating; the masking shall be completely removed by the Contractor after completion of the work.

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 Principal. This approval is required before coating commences.

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

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 work.

5.4 Surfaces to be coated which will become inaccessible after assembly or erection shall be cleaned, surface prepared and painted before assembly.

5.5 Welds, edges, crevices, seams, joints, and corners shall be stripe coated before commencement of spray application of the coating.

5.6 Mixing, thinning, application and curing of protective coatings shall be carried out in accordance with the coating manufacturer's recommended practice for the on-site conditions.

5.7 Recommended drying times between coats shall not be exceeded.

5.8 Applied coatings shall be protected from rain or moisture until curing completes.

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6.0 ATMOSPHERIC CONDITIONS

6.1 Prior to and during coating application, the contractor shall record details pertaining to environmental conditions, which include but not limited to ambient temperature, 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 unfavorable for application or curing;
- If the pot life of the paint has been exceeded.

7.0 COATING THICKNESS

7.1 Finished coating thickness shall be as follows:

- 2 pack Epoxy Mastic: 150 microns minimum DFT
- Polyurethane Top Coat: 50 microns minimum DFT
- Total minimum DFT: 200 microns

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

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.

8.2 Protective coating colours shall comply with AS/NZS 2700 - Colour Standards for General Purposes. For colour code used in treatment plants, refer to Water Corporation Colour Code Drawing No. EG71-1-1. Any other proposed colour than specified in

Water Corporation standards shall be referred to the Water Corporation for acceptance prior to use.

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 Coatings and Concrete Repair Services panel member.

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. AMPP / 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.

11.0 REPAIR OF A DEFECTIVE COATING AND RETESTING

11.1 Coatings with 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 During the course of the works, the following information shall be recorded:

- Environmental conditions (relative humidity, dew point etc.);

- Surface preparation;
- Surface profile;
- Coating application method;
- Coating testing results; and
- General failure.

12.2 These records, including completed and signed Inspection Test Plans (ITP) shall be forwarded to the Principal 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**
8	4	03/03/2023	Coating Finish	AO	SS
9	4	03/03/2023	Update coating application qualifications	AO	SS
Title, 1	**5**	**24/04/2026**	**Add aboveground uses**	**CM**	**SS**
9	**5**	**24/04/2026**	**AMPP Added**	**CM**	**SS**

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