R&D SPECIFICATION MANUAL

R&D Technical Solutions Ltd.

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Division 09700

Guide Specifications EMBE Wall Coating Systems

Note To Specifier

1. This document has been prepared to assist Specifiers in the preparation of specifications for the installation of EMBE WALL COATINGS.

   EMBE WALL COATINGS is an epoxy-wall system intended for industrial, light industrial and commercial use.

2. This document was prepared to be included as part of a complete specification for new construction or can be used as a stand-alone document for existing structures.

3. There are several areas in this document that, at the discretion of the Specifier, will require values to be inserted, as appropriate for the type of placement being specified. Physical properties for EMBE WALL COATINGS are listed Appendix A.

4. Also refer to related documents, Technical Data Sheets & Installation Procedures.

1.0 General

1.1 Scope

The contractor shall furnish all materials, tools, equipment, appliances, transportation, labor and supervision required during the preparation and installation process.

1.2 Pre-Qualification

1. Contractor and his installer(s) shall have satisfactorily completed a program of instruction in proper methods of preparation of the substrate

2. Contractor(s) seeking approval of substitute materials shall have a minimum of five (5) years experience installing this type of surfacing in similar size projects. They must also

submit their request in writing to the Architect/Engineer at least seven (7) days before closing of bids.

Include samples; testing laboratory reports regarding conformity with specifications; and list of completed successful installations, including phone number of responsible person to contact, to enable accurate appraisal of the system. Bidders shall be notified of acceptable substitute materials by written addendum or amendment.

1.3 Applicable Standards & Test Methods

Please refer to Appendix A for standards and test methods used in their results.

1.4 Project / Site Conditions

1. Minimum surface and ambient temperature of 55°F (12°C) for 48 hours before, during, and after installation, or until cured.

2. Adequate ventilation and clean water supply required during installation.

3. Substrate requirements (see Appendix B).

1.5 Warranty

1. Contractor shall submit a one-year, limited warranty against improper workmanship and defective materials (from date of use or completion, whichever comes first).

2.0 Products

2.1 Acceptable Manufacturer

1. R&D Technical Solutions Ltd
   7000 Davand Drive, Mississauga ON
   Canada L5T 1J5
   Toll Free: (800) 387-5703
   Local: (905) 795-9900
   Fax: (905) 795-9912
   www.tbsproducts.com info@rdsolutions.ca

2.2 Materials

1. EMBE WALL COATINGS, meeting or surpassing physical property requirements as listed in Appendix A.

2.3 Samples

1. Submit two (2) samples that are representative of work.

2. Construct panel 100-ft2 minimum of typical wall on site as part of final installation for approval. Location to be determined by Architect or Engineer.

3.0 Execution

3.1 Inspection

1. Surface conditions (see Appendix B)

2. Before starting work, ensure environmental and site conditions are suitable for application and curing.

3. Any and all deficiencies shall be reported, in writing, to specifying engineer, and copy sent to material manufacturer.

4. Inspect surface for acceptability of coating.

3.2 Preparation

1. Surface must be clean and sound, which in all cases, requires some form of preparation. Substrate must be prepared in accordance with manufacturer's printed instructions.

2. Concrete block should be filled with EMBE Epoxy Block Filler

3. Pre-fill surface irregularities, holes and cracks per manufacturer's recommendation.

3.3 Protection

1. Protect adjacent surfaces from damage resulting from work of this trade. If necessary, mask and/or cover adjacent surfaces, fixtures, equipment, etc., by suitable means.

2 Apply temporary protection until wall is fully cured.

3. Allow proper cure time for each installation procedure.

4. Finished work shall meet the specified standard as forementioned in specification section

5. In case of Permaglass, apply fiberglass material; gage to be determined by Specifer.

6. Sand surface between coats.

Appendix A – Physical Properties For EMBE WALL COATINGS

Property	Test Method	Test Results
Tensile Strength, Binder	ASTM C 638	6,400 psi
Tensile Elongation, Minimum Value, Binder	ASTM D 638	3.5 %
Compressive Yield Strength, Binder	ASTM D 695	10,000 psi
Flexural Yield Strength, Mortar	ASTM C 580	4300 psi
Hardness Shore D, Binder	ASTM D 2240	80
Curing Shrinkage, Binder	ASTM C 881 ASTM D 2566	<.005
Coefficient of Thermal Expansion	ASTM C 531	1.32×10^{-5}
Impact resistance – no chipping, cracking, spalling or loss of adhesion	Gardner Impact Tester	160 in/lb
Water Absorption	ASTM C 413	0.5 %
Moisture Vapor Permeability	ASTM E 96	0.06 perms
Taber Abrasion CS 17 Wheels 1,000 gm – 1000 cycles	ASTM D 4060	105 gm loss