

# R&D SPECIFICATION MANUAL

R&D Technical Solutions Ltd.

TEL: 905.795.9900

Toll Free: 800.387.5703

FAX: 905.795.9912

EMAIL: [INFO@RDSOLUTIONS.CA](mailto:INFO@RDSOLUTIONS.CA)

WEB: [WWW.KELMAR.COM](http://WWW.KELMAR.COM)

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## Division 09700

### SPECIFICATION

# EMBE® PERMAGLASS, SOLVENT FREE REINFORCED/RESINOUS WALL & CEILING SURFACING

#### NOTE TO SPECIFIER

The purpose of this suggested specification is to assist the specifier in developing a specification for the use of EMBE® PERMAGLASS SOLVENT-FREE WALL SYSTEM. Questions regarding the selection, installation, or intended end use of materials should be directed to a technical representative. This specification is prepared to be a part of a complete project specification.

#### PART 1 – GENERAL

##### 1.01 Related Documents

A. Drawings and general provisions of the contract, including General and supplementary conditions, apply to this section.

##### 1.02 Summary

A. This section specifies a fiberglass reinforced, decorative interior wall and ceiling coating system.

B. EMBE® PERMAGLASS Solvent Free system is a monolithic wall and

ceiling coating system able to withstand severe impact and temperature fluctuations and can be modified depending upon the agreed to requirements of this project.

### 1.03 References

ASTM D S22-88	Test Method for Mandrel Bond Test of Attached Organic Coatings
ASTM D 1044-90	Test Method for Resistance of Transparent Plastics to Surface Abrasion
ASTM D 1864-88	Test Method for Moisture in Mineral Aggregates
ASTM D 4263-88	Test Method for Capillary Moisture in Concrete by Plastic Sheet
ASTM E 84-91	Test Method for Surface Burning Characteristics of Building Materials

### 1.04 System Performance Requirements

- A. Provide an epoxy wall and ceiling coating system that, when cured, produces the following typical properties:

<u>PROPERTY</u>	<u>TEST METHOD</u>	<u>RESULT</u>
Flexibility	ASTM D 522-88	Passes 1" mandrel without cracking
Wear Resistance	ASTM D 1044-00	0.019 gm loss
Fire Resistance	ASTM E 84-91	Class A & B Systems Available Consult the manufacturer
Impact Resistance	Gardner Impact	>160 in . lb

### 1.05 Submittals

- A. Submit manufacturer's technical data and product literature indicating that the products comply with specified requirements.
- B. Submit two mock-up sample coupons that are representative of the finished wall and ceiling surface, texture and color.

### 1.06 Quality Assurance

- A. Installer Qualification: Use only a qualified installer for the wall system manufacturer of having completed a program of instruction in proper methods for preparation of substrate, possible delaminated areas, crack and joint repair and complete wall and ceiling system installation.

- B. Mock-up: On site, fabricate a panel approximately 100 sq. ft. (10 sq. m.) to demonstrate quality of finished wall and ceiling system, complying with manufacturer's instructions. Install panel where directed by architect/engineer. Maintain panel as a standard of quality for all installations.

### **1.07 Delivery, Storage and Handling**

- A. Deliver product in factory packages, clearly marked with manufacturer's identification, printed instructions, lot numbers and shelf life expiration date for each component.
- B. Store materials at 50 F to 90 F (10 C to 32 C) in dry environment away from sunlight, heat, or other hazards.

### **1.08 Project Conditions**

- A. Maintain minimum substrate surface temperature of 55 F (12 C) for a minimum of 48 hours, during and after installation, or other hazards.
- B. Substrate must be free of hydrostatic, capillary or moisture vapor pressure. Substrates in contact with ground must have a properly installed, effective vapor barrier to help prevent potential problems resulting from hydrostatic, capillary or moisture vapor pressure. Concrete must contain less than 3% moisture when tested per ASTM D 1864.
- C. Do not apply sealers or membrane curing agents to concrete. Moisture curing of concrete is recommended.
- D. Concretes containing lightweight aggregates are not recommended substrates.
- F. Advise other trades of fixtures and fittings not to be installed until system is cured, such as radiators, painting, decorating, floor-supported equipment or cabinetwork, caulking, plumbing, fixtures, etc.
- G. Work areas shall be kept free of traffic and no trades shall be permitted in rooms during the application and curing of the coating.
- H. 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.
- I. Gypsum drywall is only suitable for dry areas. Water-resistant Gypsum board is suitable in occasionally wet areas. Install drywall in accordance with drywall manufacturer's directions and with the factory paper bound edge 1/4 inch (6.4 mm) above floor line. Tape and fill joints; fill all fastener heads and other indentations for smooth finished surface.

## **PART 2 – PRODUCTS**

### **2.01 Materials**

- A. Reinforced/Resinous Wall and Ceiling System: PERMAGLASS Solvent Free system.
  - 1. (OPTIONAL) Use PERMAGLASS Solvent Free system with fibreglass fabric and 100% solids thermosetting resins providing a dry film thickness of 21 to 35 mils; Class B fire rating.
  - 2. (OPTIONAL) Use PERMAGLAZE Solvent Free system with 100% solids thermosetting resins with no fibreglass providing a dry film thickness to 6 to 10 mils; Class A fire rating.
- B. (OPTIONAL) Wall and Ceiling Topcoat: PERMAGLAZE

## **PART 3 – EXECUTION**

### **3.01 Inspection**

- A. Before starting work, ensure that environmental and site conditions are suitable for application and curing.
- B. Inspect surfaces for acceptability of levelness, moisture content and other critical factors at time of installation.
- C. Report in writing to architect/engineer, with copy to manufacturer, of deficiencies that could impair work. Surfaces must be approved by the certified contractor prior to application of the system.

### **3.02 Surface Preparation**

- A. Prepare surfaces in accordance with manufacturer's instructions.
- B. Remove concrete laitance by steel shot blasting, grit blasting, or other method approved by manufacturer.
- C. Surface must be clean, sound and dry prior to application.
- D. Pre-fill surface irregularities, holes and cracks in accordance with manufacturer's recommendations.

### **3.03 Mixing**

- A. Comply with manufacturer's instructions for mixing procedures.

- B. Pre-mix each component before every batch to ensure uniformity.
- C. Carefully measure and mix the components together.

### **3.04 Installation**

- A. Follow manufacturer's written instructions.
- B. Prime entire surface with recommended primer.
- C. Apply coating in accordance with manufacturer's instruction to a total thickness depending upon the agreed to requirements of the installation.
- D. Apply grout coat(s) and topcoat(s) at manufacturer's recommended coverage to provide uniform dense surface.
- E. Allow proper cure time for each installation step.
- F. Allow the finished system to cure for a minimum of 7 days from completion before putting into service.