



*SPECIFICATION*  
Section 09708

**DUROPLAST 100  
EPOXY FLOOR COATING SYSTEM**

Note to Specifiers

The purpose of this outline specification document is to assist the specifier to compile a specification for the proper use of Duroplast 100 as a floor coating. This document has been prepared to be part of a complete project specification and is not intended to be used as a project document by itself.

**PART 1 - GENERAL**

- 1.01 RELATED DOCUMENTS: Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 - General Requirements, apply to work of this section.
- 1.02 WORK INCLUDED: Application of a complete epoxy coating system, including surface preparation, primer, and finish coat.
- 1.03 RELATED WORK SPECIFIED IN OTHER SECTIONS:
- |                   |               |
|-------------------|---------------|
| A: Concrete work: | Section 03300 |
| B: Joint sealant: | Section 07900 |
- 1.04 QUALITY ASSURANCE:
- A: **Only experienced applicators authorized by the coating manufacturer are to be used to install this coating system.**
- B: Prior to commencement of any work, a minimum 2 m<sup>2</sup> (20 ft<sup>2</sup>) mock-up will be installed on site for each system. This will be viewed by all parties, and only when accepted will work of same system be allowed to proceed. The mock-up will serve as a benchmark for the installation of each system for the entire project.
- 1.05 SUBMITTALS: Comply with Section 01300.
- A: Product Data: Submit manufacturer's technical data, installation instructions, and general recommendations.
- B: Samples: Submit color samples on rigid backing for selection and approval of owner's representative, architect or engineer.

1.06 PRODUCT DELIVERY AND STORAGE:

- A: Deliver materials to job site in sealed, undamaged containers clearly labelled with name and batch number.
- B: Store materials to comply with manufacturer's directions to prevent deterioration due to moisture, heat, cold, direct sunlight or any other causes.

1.07 JOB CONDITIONS:

- A: Provide temporary traffic barriers and supervision necessary to control traffic during coating operations.
- B: Ensure that storage areas for coating materials and floor surfaces are above 13°C (55°F) and below 29°C (85°F) for a minimum of 48 hours prior to installation.
- C: Commencement of installation implies acceptance of the concrete surface as suitable to receive the coating system.
- D: Apply coating materials in strict accordance to all safety and weather conditions as required by manufacturer of coating materials or as required by Municipal, Provincial and Federal rules and regulations.

**PART 2 - PRODUCTS**

2.01 GENERAL: All components and products of the coating system shall be manufactured and supplied by a single manufacturer.

2.02 MANUFACTURER: DUOCHEM INC., 1250 Graham Bell, Boucherville, Quebec J4B 6H5, Telephone 450-655-6421 or 1 888 577-6421. Branch Offices: Dartmouth, N.S., 902-468-7878 or 1 877 829-9769; Toronto, Ont., 416-630-2736 or 1 800 268-7936; Western Ontario, 519-245-8151; Vancouver, B.C., 604-521-0572, Western Canada 1 877 455-9595.

2.03 EPOXY FLOOR COATING: Duroplast 100 floor coating system, consisting of primer and finish coat. Available in standard colors.

- A: Primer: Duroplast 100
- B: Finish Coat: Duroplast 100
- C: Anti-slip aggregate: Clean graded silica sand (optional)

**Note to Specifiers**

**Duroplast 100 can be installed with an anti-slip texture. Select smooth, light anti-slip, medium anti-slip, coarse anti-slip.**

**PART 3 - EXECUTION**

3.01 INSPECTION:

Examine surfaces and conditions under which flooring is to be applied. Moisture content of surfaces and building air temperatures must be within limits recommended by the flooring manufacturer. Do not start work until unsatisfactory conditions have been corrected. Application of materials indicates acceptance of surfaces.

- 3.01 A: Surfaces shall be free of membrane curing compounds, laitance, dust, dirt, grease, oil and other contaminants that may affect proper adhesion of the coating.
- B: Surfaces to receive coating shall be equivalent to a light steel trowel finish for new or patched concrete surfaces.
- C: Moisture content of the concrete shall be checked using a Delmhorst moisture meter. Moisture content shall be within the limits set by the manufacturer prior to commencing work.
- D: Do not apply coating system if ambient temperature is below 10°C (50°F) or above 32°C (90°F) or if relative humidity is above 80%.

3.02 SURFACE PREPARATION:

- A: Thoroughly clean all surfaces to receive coating by steel shotblast, sandblast, or other method approved by manufacturer.
- B: Remove projections and other conditions that may affect the installation of the coating.
- C: Protect adjacent surfaces, fixtures and equipment with drop cloths or masking as necessary to prevent damage from splatter or spillage.
- D: Repair all surface spalls and imperfections with Duochem 8107 or other patching compound approved by manufacturer.

3.03 MATERIAL PREPARATION: Carefully prepare and mix materials used in flooring work in compliance with manufacturer's instructions.

3.04 FLOORING APPLICATION:

Apply each component of system in compliance with manufacturer's directions to produce a uniform wearing surface of 400 microns (16 mils) dry film thickness, uninterrupted except at sawn joints, or other types of joints, indicated or required.

- A: Prime Coat: Apply coating over prepared substrate with squeegee or roller at spreading rate required to produce a minimum dry film thickness of 200 microns (8 mils). Sprinkle appropriate size mesh aggregate into wet coating film and backroll to achieve selected anti-slip texture. Allow coating to harden at least 12 hours before applying finish coat.
- B: Finish Coat: Apply finish coat by squeegee or roller at spreading rate required to produce a minimum dry film thickness of 200 microns (8 mils).

3.05 JOINTS:

Where substrate is interrupted by expansion or control joints, provide joint in flooring to comply with details indicated, or if not indicated, as recommended by flooring manufacturer. Fill joints with Duropli elastomeric caulking compound manufactured by Duochem Inc. or as specified in Section 07900.

3.06 CLEANING AND PROTECTION:

- A: Clean uncured flooring materials from surfaces with Duochem 201 Solvent. Removal of cured materials requires scraping, chipping or grinding.
- B: Protect flooring materials from wear and damage during construction operations.
- C: Clean flooring just prior to final acceptance using materials and procedures recommended by flooring manufacturer.

END OF SECTION  
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*SPECIFICATION*  
Section 09770

**DUROPLAST 100 F.R. (FIBER REINFORCED)  
EPOXY WALL COATING**

Note to Specifiers

The purpose of this outline specification document is to assist the specifier to compile a specification for the proper use of Duroplast 100 F.R. Wall Coating System. This document has been prepared to be part of a complete project specification and is not intended to be used as a project document by itself.

Duroplast 100 may be installed without fiberglass reinforcement. Refer to Duroplast 100 wall coating if this is required for your project.

**PART 1 – GENERAL**

- 1.01 RELATED DOCUMENTS: Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 – General Requirements, apply to work of this section.
- 1.02 WORK INCLUDED: Application of reinforced epoxy wall coating, complete, and including surface preparation, and finish coats.
- 1.03 QUALITY ASSURANCE:
- A: **Applicator of coating system shall have a minimum of three years recent experience in applying similar coatings and shall be an "Authorized Applicator" recognized in writing by the manufacturer of the coating materials.**
  - B: Prior to commencement of any work, a minimum 2 m<sup>2</sup> (20 ft<sup>2</sup>) mock-up will be installed on site for each system. This will be viewed by all parties, and only when accepted will work of same system be allowed to proceed. The mock-up will serve as a benchmark for the installation of each system for the entire project.
  - C: During job mock-up and initial period of installation, manufacturer of coating system will provide a trained employee to insure proper use and installation of product. Periodic site visits will also be made during installation to verify continued proper installation.
- 1.04 SUBMITTALS: Comply with Section 01300.
- A: Samples: Submit two samples representative of coating system applied to suitable rigid substrate.
  - B: Manufacturer's Literature: Submit two copies of manufacturer's literature, specifications and application instructions for all products provided.

- 1.04 C: Attestation: Submit a minimum of three projects of similar nature which have been installed during the last five years, including name, locations and installation date.
- D: Applicator Certificate: Submit "Authorized Applicator" certificate issued to system applicator by coating material manufacturer.
- 1.05 DELIVERY AND STORAGE:
- A: Deliver materials to job site in sealed, undamaged containers clearly labelled with name and manufacturing date or batch number.
- B: Store materials according to manufacturer's directions to prevent deterioration due to moisture, heat, cold, direct sunlight or any other causes.
- 1.06 JOB CONDITIONS:
- A: Provide temporary barriers and supervision necessary to control traffic during coating operations.
- B: Ensure that surfaces to receive coating products are above 13°C (55°F) and below 29°C (85°F) for a minimum of 48 hours prior to installation.
- C: Commencement of installation implies acceptance of the surface as suitable to receive the wall coating. Contractor must be notified in writing of any deficiency of wall surface or if the surface is unacceptable.
- D: Apply coating materials in strict accordance to the manufacturer of coating materials printed application procedures.
- E: Establish appropriate health, safety and environmental protection practices, in consultation with appropriate regulatory authorities, if necessary, to achieve compliance with any existing applicable regulatory requirements prior to use of products.

## **PART 2 – PRODUCTS**

- 2.01 GENERAL: All components and products of the coating system shall be manufactured and supplied by a single manufacturer.
- 2.02 MANUFACTURER: DUOCHEM INC., 1250 Graham Bell, Boucherville, Quebec J4B 6H5, Telephone 450-655-6421 or 1 888 577-6421. Branch Offices: Dartmouth, N.S., 902-468-7878 or 1 877 829-9769; Toronto, Ont., 416-630-2736 or 1 800 268-7936; Western Ontario, 519-245-8151; Vancouver, B.C., 604-521-0572, Western Canada 1 877 455-9595.
- 2.03 EPOXY WALL COATING SYSTEM: Duroplast 100, two component, 90% solids content epoxy coating, consisting of primer, reinforcing fabric and topcoats. Available in standard colors.
- A: Primer: Duochem 265
- B: Fiberglass reinforcement: Scandatex 6164 by KSI Multitex
- C: Finish Coats: Duroplast 100

**Note to Specifiers**

**Concrete block surfaces require a leveling coat of Duroplast 401 cementitious surfacer prior to application of Duroplast 100 F.R.**

**PART 3 – EXECUTION**

**3.01 INSPECTION:**

Examine surfaces and conditions under which coating is to be applied. Moisture content of surfaces and building air temperatures must be within limits recommended by the coating manufacturer. Do not start work until unsatisfactory conditions have been corrected. Application of materials indicates acceptance of surfaces.

**3.02 SURFACE PREPARATION:**

- A: Clean surfaces free of laitance, dirt, dust, grease, oil and other foreign material.
- B: For pour-in-place concrete, abrasive brush blast surface to remove laitance.

**3.03 MATERIAL PREPARATION:** Carefully prepare and mix materials used in compliance with manufacturer's directions. Proceed with application immediately after mixing.

**3.04 APPLICATION:**

Apply each component of wall coating system in compliance with manufacturer's directions to produce a pinhole free surface. Total dry film thickness of complete system including membrane and epoxy finish coat to be 875 microns (35 mils) uninterrupted except at expansion joints.

- A: Fill all interior corners with Duochem Duropli Vertical caulking compound and tool to one inch radius. Allow to cure minimum 12 hours prior to proceeding with subsequent coats.
- B: Apply a coat of Duroplast 100 at the approximate rate of 4 m<sup>2</sup>/l (165 ft<sup>2</sup>/US gallon). Before it hardens, press a woven glass fiber cloth (Scandatex 6164 by KSI Multitex) into coating and scrape with a rubber squeegee or putty knife to remove wrinkles and excess Duroplast 100. Butt joints in cloth and cut with a sharp instrument around openings at floor and at ceiling. When dry, sand rough areas of the surface with mechanical sanders and fill any voids with Duroplast 100. Apply a second coat of Duroplast 100 at a rate of approximately 4 m<sup>2</sup>/l (165 ft<sup>2</sup>/US gallon). When dry, sand and apply a third coat. If the second or third coat are applied after more than 48 hours, sand surface prior to coating.

**3.05 CLEANING AND PROTECTION:**

- A: Protect work, including work of other trades, against damage.
- B: Clean uncured coating-spattered surfaces with Duochem 201 Solvent. Cured coating requires scraping to remove.
- C: Remove discarded materials, rubbish, cans and rags from site.

END OF SECTION

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## *SPECIFICATION*

Section 09770

# **DUROPLAST 100 EPOXY WALL COATING**

### Note to Specifiers

The purpose of this outline specification document is to assist the specifier to compile a specification for the proper use of Duroplast 100 Wall Coating System. This document has been prepared to be part of a complete project specification and is not intended to be used as a project document by itself.

As a result of the outstanding toughness and durability of Duroplast 100, it can also be used as a floor coating system. Refer to Duroplast 100 Floor Coating for an outline specification for this application.

Duroplast 100 may be installed with fiberglass reinforcement for increased durability and impact resistance. Refer to Duroplast 100 F.R. Wall Coating if this is required for your project.

### PART 1 - GENERAL

- 1.01 RELATED DOCUMENTS: Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 - General Requirements, apply to work of this section.
- 1.02 WORK INCLUDED: Application of epoxy wall coating complete including surface preparation, primer and finish coats.
- 1.03 QUALITY ASSURANCE:
- A: **Applicator of coating system shall have experience in applying similar coatings and shall be an "Authorized Applicator" recognized in writing by the manufacturer of the coating materials.**
  - B: Prior to commencement of any work, a minimum 2 m<sup>2</sup> (20 ft<sup>2</sup>) mock-up will be installed on site for each system. This will be viewed by all parties, and only when accepted will work of same system be allowed to proceed. The mock-up will serve as a benchmark for the installation of each system for the entire project.
  - C: During job mock-up and initial period of installation, manufacturer of coating system will provide a trained employee to insure proper use and installation of product. Periodic site visits will also be made during installation to verify continued proper installation.
- 1.04 SUBMITTALS: Comply with Section 01300.
- A: Samples: Submit two samples representative of coating system applied to suitable rigid substrate.

- 1.04 B: Manufacturer's Literature: Submit two copies of manufacturer's literature, specifications and application instructions for all products provided.
- C: Applicator Certificate: Submit "Authorized Applicator" certificate issued to system applicator by coating material manufacturer.
- 1.05 DELIVERY AND STORAGE:
- A: Deliver materials to job site in sealed, undamaged containers clearly labelled with name and manufacturing date or batch number.
- B: Store materials according to manufacturer's directions to prevent deterioration due to moisture, heat, cold, direct sunlight or any other causes.
- 1.06 JOB CONDITIONS:
- A: Provide temporary barriers and supervision necessary to control traffic during coating operations.
- B: Ensure that surfaces to receive coating products are above 13°C (55°F) and below 29°C (85°F) for a minimum of 48 hours prior to installation.
- C: Commencement of installation implies acceptance of the surface as suitable to receive the wall coating. Contractor must be notified in writing of any deficiency of wall surface or if the surface is unacceptable.
- D: Apply coating materials in strict accordance to the manufacturer of coating materials printed application procedures.
- E: Establish appropriate health, safety and environmental protection practices, in consultation with appropriate regulatory authorities, if necessary, to achieve compliance with any existing applicable regulatory requirements prior to use of products.

## **PART 2 - PRODUCTS**

- 2.01 General: All components and products of the coating system shall be manufactured and supplied by a single manufacturer.
- 2.02 MANUFACTURER: DUOCHEM INC., 1250 Graham Bell, Boucherville, Quebec J4B 6H5, Telephone 450-655-6421 or 1 888 577-6421. Branch Offices: Dartmouth, N.S., 902-468-7878 or 1 877 829-9769; Toronto, Ont., 416-630-2736 or 1 800 268-7936; Western Ontario, 519-245-8151; Vancouver, B.C., 604-521-0572, Western Canada 1 877 455-9595.
- 2.03 EPOXY WALL COATING SYSTEM: Duroplast 100, two components, 90% solids content epoxy coating, consisting of primer and topcoats. Available in standard colors.
- A: Primer: Duochem 265 or Duochem VA or Duochem EE
- B: Finish Coats: Duroplast 100

### **Note to Specifiers**

**Different primers are required for different surfaces. Select the primer as indicated below for your application.**

**Concrete Block: Duochem VA Blockfiller.**

**Poured in Place or Precast Concrete: Duochem 265.**

**Concrete surfaces in damp environments: Duochem EE Blockfiller.  
Gypsum Wall Board: Duochem 265.**

### **PART 3 – EXECUTION**

#### **3.01 INSPECTION:**

Examine surfaces and conditions under which coating is to be applied. Moisture content of surfaces and building air temperatures must be within limits recommended by the coating manufacturer. Do not start work until unsatisfactory conditions have been corrected. Application of materials indicates acceptance of surfaces.

- A: Moisture content of the concrete shall be checked using a Delmhorst moisture meter. Moisture content shall be within the limits set by the manufacturer prior to commencing work.
- B: Surfaces shall be free of membrane curing compounds, laitance, dust, dirt, grease, oil and other contaminants that may affect proper adhesion of the coating.
- C: Do not apply coating system if ambient temperature is below 10°C (50°F) or above 32°C (90°F) or if relative humidity is above 80%.

#### **3.02 SURFACE PREPARATION:**

- A: Clean surfaces free of laitance, dirt, dust, grease, oil and other foreign material.
- B: For pour-in-place concrete, abrasive brush blast surface to remove laitance.

**3.03 MATERIAL PREPARATION:** Carefully prepare and mix materials used in compliance with manufacturer's directions. Proceed with application immediately after mixing.

#### **3.04 APPLICATION:**

Apply each component of wall coating system in compliance with manufacturer's directions to produce a pinhole free surface. Total dry film thickness of epoxy finish coat to be 400 microns (16 mils) uninterrupted except at expansion joints.

**Primer:** Apply appropriate primer by spray, brush or roller at spreading rate recommended by manufacturer to achieve a pinhole free surface in two coats.

**Finish Coat:** Apply finish coat in two coats by spray, brush or roller at spreading rate recommended by manufacture to achieve a total dry film thickness as specified.

#### **3.05 CLEANING AND PROTECTION:**

- A: Protect work completed against damages and spillages.
- B: Clean uncured coating-spattered surfaces with Duochem 201 Solvent. Cured coating requires scraping to remove.
- C: Remove discarded materials, rubbish, cans and rags from site.

END OF SECTION  
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