



SPECIFICATION
Section 09620

**DUOCHEM 9400
EPOXY TOPPING SYSTEM
BROADCAST APPLIED TO 3 MM (1/8")**

Note to Specifiers

The purpose of this outline specification document is to assist the specifier to compile a specification for the proper use of Duochem 9400 as a broadcast applied 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.

Duochem 9400 is specifically designed to be used as coating, broadcast, or trowelled system. This specification applies to Duochem 9400 as a 3 mm (1/8") broadcast system.

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: Broadcast application of epoxy flooring including surface preparation, primer, body coat with aggregate 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 m² (20 ft²) 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 TOPPING SYSTEM: Duochem 9400 sand filled epoxy flooring system consisting of primer, aggregate filled body coat and finish coat(s). Available in standard colors.

- A: Primer: Duochem 9400
- B: Body Coat: Duochem 9400 broadcast with clean graded silica sand
- C: Finish Coat: Duochem 9400

Note to Specifiers

Duochem 9400 broadcast has an inherent anti-slip texture that can be installed with varying degrees of skid resistance. Select smooth, light anti-slip, medium anti-slip, coarse anti-slip. Different topcoats may be used to enhance the performance or alter the gloss of Duochem 9400 broadcast. Consult your Duochem representative for an appropriate recommendation. Duochem 390 elastomeric membrane may be applied beneath this system for waterproofing when application is on structural concrete slabs.

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.

- A: Surfaces shall be free of membrane curing compounds, laitance, dust, dirt, grease, oil and any other contaminant 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 flooring system.
- C: Protect adjacent surfaces, fixtures and equipment with drop cloths or masking as necessary to prevent damage during surface preparation.
- D: Repair all surface spalls and imperfections with Duochem 9400 blended with selected aggregates or other approved 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 flooring system in compliance with manufacturer's directions to produce a uniform monolithic wearing surface of 3 mm (1/8") thickness, uninterrupted except at sawn joints, or other types of joints, indicated or required.

- A: Prime Coat: Apply Duochem 9400 over prepared substrate with trowel, squeegee, or roller, at manufacturer's recommended spreading rate, with timing of application coordinated with subsequent application of topping mix to ensure optimum adhesion between flooring materials and substrate.
- B: Body Coat: Squeegee apply Duochem 9400 over tacky primer at spreading rate required to produce minimum thickness specified. Saturate wet intermediate coat with sand topping by sprinkling (broadcasting) sand so that it falls vertically into the resin. Remove excess and projecting sand aggregate. Allow topping to harden at least 12 hours before applying finish coat(s).

- 3.04 C: Finish Coat(s): Apply Duochem 9400 by flat rubber squeegee or flexible trowel to provide specified finish.
- 3.05 COVE BASE: Apply flooring system to wall surfaces to form base with cove of radius and height as indicated. Round interior and exterior corners.

Note to Specifier

Cove bases are optional. System may be installed without coved base. If installed without coved base specify a pre-manufactured base product.

3.06 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. Joint sealant materials and installation are specified in Section 07900.

3.07 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
09620



SPECIFICATION

Section 09670

DUOCHEM 9400 EPOXY 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 Duochem 9400 as a 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.

Duochem 9400 is specifically designed to be used as coating, broadcast, or trowelled system. This specification applies to Duochem 9400 as a minimum 450 microns (18 mils) coating.

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 m² (20 ft²) 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: Duochem 9400/9450 floor coating system, consisting of primer and finish coat. Available in standard colors.

- A: Primer: Duochem 9400
- B: Finish Coat: Duochem 9450
- C: Anti-slip aggregate: Clean graded aggregate (optional)

Note to Specifiers

Duochem 9400 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 any other contaminant 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 9400 blended with selected aggregates 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 500 microns (20 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 150 microns (6 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 350 microns (14 mils).
- C: Duroplast 902 aliphatic polyurethane can be used in areas where UV stability is required. This should be applied in 1 coat at a rate of 50-75 microns (2-3 mils) dry film thickness.

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
09670



SPECIFICATION

Section 09620

DUOCHEM 9400 6 MM (1/4") TROWEL APPLIED 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 Duochem 9400 as a trowelled 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.

Duochem 9400 is specifically designed to be used as coating, broadcast or trowelled system. This specification applies to Duochem 9400 as a 6 mm (1/4") trowelled applied system.

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: Trowel application of epoxy flooring including surface preparation, primer, multi-colored aggregate topping, 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 m² (20 ft²) 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 the 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 TOPPING SYSTEM: Duochem 9400 aggregate filled epoxy flooring system, consisting of primer, aggregate topping, grout coat and finish coat(s). Available in Duochem standard colors.

- A: Primer: Duochem 9400
- B: Aggregate Topping: Duochem 9400 mixed with Unimin 2010 or similar aggregate
- C: Grout Coat: Duochem 9400
- D: Finish Coat: Duochem 9400

2.04 DIVIDER STRIP: "L" shape to required floor thickness, white alloy zinc or brass.

Note to Specifiers

Duochem 9400 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.

- A: Surfaces shall be free of membrane curing compounds, laitance, dust, dirt, grease, oil and any other contaminant 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 flooring system.
- C: Protect adjacent surfaces, fixtures and equipment with drop cloths or masking as necessary to prevent damage from surface preparation.

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 flooring system in compliance with manufacturer's directions to produce a uniform monolithic wearing surface of 6 mm (1/4") thickness, uninterrupted except at sawn joints, or other types of joints, indicated or required.

Note to Specifier

Select system thickness required for your project.

- A: Prime Coat: Apply primer over prepared substrate with trowel, squeegee, or roller, at manufacturer's recommended spreading rate, with timing of application coordinated with subsequent application of topping mix to ensure optimum adhesion between flooring materials and substrate.
- B: Aggregate Topping Mix: Trowel apply aggregate topping mix over tacky primer one coat and at spreading rate required to produce minimum thickness specified. Allow topping to harden at least 12 hours before applying finish coats.
- C: Grout Coat: Apply grout coat by flat rubber squeegee or flexible trowel to fill any voids that may form during application of aggregate topping mix.

- 3.04 D: Finish Coat: Apply specified finish coat by roller, at spreading rate recommended by manufacturer.
- 3.05 COVE BASE: Apply flooring system to wall surfaces to form base with cove of radius and height as indicated. Round interior and exterior corners.

Note to Specifier

Cove bases are optional. System may be installed without coved base. If installed without coved base specify a premanufactured base product.

3.06 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.

3.07 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
09620