



*SPECIFICATION*  
Section 07570

**RESOCLAD TYPE II  
MECHANICAL ROOM WATERPROOFING 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 Resoclad Type II Mechanical Room Waterproofing 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.

**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 coating system, complete, including surface preparation, membrane and finish coats.
- 1.03 RELATED WORK SPECIFIED IN OTHER SECTIONS:
- |    |                |               |
|----|----------------|---------------|
| A: | Concrete work: | Section 03300 |
| B: | Joint sealant: | Section 07900 |
- 1.04 QUALITY ASSURANCE:
- A: **Applicator of coating system shall have a minimum of three years recent experience in applying coatings to concrete surfaces 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.

1.05 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.
- C: Attestation: Submit a minimum of five 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.
- E: Guarantee Requirements: Upon completion and acceptance of the work, submit an executed copy of the guarantee.

1.06 PRODUCT 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.

1.07 JOB CONDITIONS:

- A: Provide temporary traffic 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 concrete surface as suitable to receive the traffic coating. Contractor must be notified in writing of any deficiency of the concrete 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., 416-665-5885 or 1 888 405-7222; Western Ontario, 519-245-8151; Vancouver, B.C., 604-521-0572, Western Canada 1 877 455-9595.

2.03 WATERPROOF COATING: The waterproof coating shall consist of a flexible, liquid applied, solvent free elastomeric membrane and a water based topcoat. Available in standard Duochem colours.

- A: Primer: Not required on clean dry surfaces.
- B: Membrane: Duochem 390, a two component, 100% solids, solvent free, flexible urethane.
- C: Topcoat: Duochem 6001, water based epoxy coating.
- D: Anti-slip aggregates: Duochem 6 synthetic aggregate (optional).

**Note to Specifier**

**Since mechanical room waterproofing is typically installed when projects are substantially complete or in existing buildings, ensure that only solvent free systems are used to prevent any explosion hazards.**

**Resoclad Type II may be installed smooth or with anti-slip texture. If smooth finish is preferred, delete use of anti-slip aggregates.**

**PART 3 - EXECUTION**

3.01 INSPECTION:

Examine surfaces and conditions under which coating system 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: Surfaces shall be free of curing compound membrane, 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 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 green section of concrete scale prior to commencing work
- D: Do not apply deck coating system if ambient temperature and surface temperature is below 4°C (41°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 in accordance to the manufacturer's instructions.
- B: Remove projections and other conditions that may affect the installation of the coating.
- C: Rout or sawcut all cracks exceeding 1.5 mm (1/16") in width and fill with Duropli sealant. Use materials and methods recommended by the coating manufacturer.

- 3.02 D: Protect adjacent surfaces, fixtures and equipment with drop cloths or masking as necessary to prevent damage during surface preparation.
- E: Repair all surface spalls and imperfections with Duochem 390 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 to manufacturer's instructions.
- 3.04 FLASHINGS:
- A: Provide fluid applied integral flashings at all locations where a horizontal surface abuts a vertical surface and at all projections. Duochem 390 membrane shall be applied over the prepared surfaces at the minimal rate of 500 microns (20 mils) thick and shall extend 10 cm (4") minimum on vertical surfaces.
- B: At projections through concrete slab such as post, pipes, railings, vents, and similar locations of potential movement, install a 1.5 cm (1/2") bead of Duropli sealant, tool form a cove and allow to cure prior to coating.
- 3.05 DETAIL WORK:
- Apply Duochem 390 membrane at a minimum thickness of 500 microns (20 mils) for a distance of 5 cm (2") each side of all unfilled visible cracks up to 0.15 cm (1/16") wide, and filled cracks in concrete surface, control joints and construction joints to receive coating. Allow to dry (8-16 hours) before proceeding to the application of the waterproofing membrane.
- 3.06 WATERPROOFING MEMBRANE:
- A: Apply Duochem 390 Waterproofing membrane at a minimum thickness of 750 microns (30 mils). Spread waterproofing membrane evenly over flashing and detailed work.
- B: Allow 8-16 hours of curing before proceeding to the application of subsequent coating.
- 3.07 TOPCOAT:
- A: Apply Duochem 6001 water based epoxy at a minimum dry mil thickness of 125 microns (5 mils).
- B: Allow topcoat to cure 48 hours before allowing traffic to resume on the coated surfaces.

**Note to Specifiers**

**Duroplast 902 may be used as a topcoat for added ultra violet protection for exterior applications.**

3.08 CLEANING:

- A: Remove remaining materials and debris from site and dispose of according to rules and regulations.
- B: Uncured Duochem 390 can be cleaned with Duochem 208 or 205 Solvent and Duochem 6001 with warm water. Cured materials are unaffected by solvents or any cleaning chemicals; it will require grinding, chipping or scraping to be removed

END OF SECTION  
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*SPECIFICATION*  
Section 07140

**RESOCLAD TYPE III  
HEAVY DUTY  
MECHANICAL ROOM WATERPROOFING 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 Resoclad Type III Mechanical Room Waterproofing 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.

**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 coating system, complete, including surface preparation, membrane and finish coats.
- 1.03 RELATED WORK SPECIFIED IN OTHER SECTIONS:
- |    |                |               |
|----|----------------|---------------|
| A: | Concrete work: | Section 03300 |
| B: | Joint sealant: | Section 07900 |
- 1.04 QUALITY ASSURANCE:
- A: **Applicator of coating system shall have a minimum of three years recent experience in applying coatings to concrete surfaces 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.

1.05 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.
- C: Attestation: Submit a minimum of five 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.
- E: Guarantee Requirements: Upon completion and acceptance of the work, submit an executed copy of the guarantee.

1.06 PRODUCT 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.

1.07 JOB CONDITIONS:

- A: Provide temporary traffic barriers and supervision necessary to control traffic during coating operations.
- B: Ensure that storage areas for coating materials 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 traffic coating. Contractor must be notified in writing of any deficiency of the concrete 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., 416-665-5885 or 1 888 405-7222; Western Ontario, 519-245-8151; Vancouver, B.C., 604-521-0572, Western Canada 1 877 455-9595.

2.03 WATERPROOF COATING: The waterproof coating shall consist of a flexible, liquid applied, solvent free elastomeric membrane and a water based topcoat. Available in standard Duochem colours.

- A: Primer: Not required on clean dry surfaces.
- B: Membrane: Duochem 390, a two component, 100% solids, solvent free, flexible urethane.
- C: Wearcourse: Duochem 391, a two component, 100% solids, solvent free flexible urethane wear surface.
- D: Topcoat: Duochem 6001, water based epoxy coating.
- E: Anti-slip aggregates: Duochem 6 synthetic aggregate (optional).

**Note to Specifier**

**Since mechanical room waterproofing is typically installed when projects are substantially complete or in existing buildings, ensure that only solvent free systems are used to prevent any explosion hazards.**

**Resoclad Type III may be installed smooth or with anti-slip texture. If smooth finish is preferred, delete use of anti-slip aggregates.**

**PART 3 - EXECUTION**

3.01 INSPECTION:

Examine surfaces and conditions under which coating system 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: Surfaces shall be free of curing compound membrane, 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 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 green section of concrete scale prior to commencing work
- D: Do not apply deck coating system if ambient temperature and surface temperature is below 4°C (41°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 in accordance to the manufacturer's instructions.
- B: Remove projections and other conditions that may affect the installation of the coating.

3.02 C: Rout or sawcut all cracks exceeding 1.5 mm (1/16") in width and fill

with Duropli sealant. Use materials and methods recommended by the coating manufacturer.

- D: Protect adjacent surfaces, fixtures and equipment with drop cloths or masking as necessary to prevent damage during surface preparation.
- E: Repair all surface spalls and imperfections with Duochem 390 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 to manufacturer's instructions.

3.04 FLASHINGS:

- A: Provide fluid applied integral flashings at all locations where a horizontal surface abuts a vertical surface and at all projections. Duochem 390 membrane shall be applied over the prepared surfaces at the minimal rate of 500 microns (20 mils) thick and shall extend 10 cm (4") minimum on vertical surfaces.
- B: At projections through concrete slab such as post, pipes, railings, vents, and similar locations of potential movement, install a 1.5 cm (1/2") bead of Duropli sealant, tool form a cove and allow to cure prior to coating.

3.05 DETAIL WORK:

Apply Duochem 390 membrane at a minimum thickness of 500 microns (20 mils) for a distance of 5 cm (2") each side of all unfilled visible cracks up to 0.15 cm (1/16") wide, and filled cracks in concrete surface, control joints and construction joints to receive coating. Allow to dry (8-16 hours) before proceeding to the application of the waterproofing membrane.

3.06 WATERPROOFING MEMBRANE:

- A: Apply Duochem 390 waterproofing membrane with notched squeegee and roller at a minimum thickness of 750 microns (30 mils). Spread waterproofing membrane evenly over flashing and detailed work.
- B: Allow 8-16 hours of curing before proceeding to the application of subsequent coating.

3.07 WEARCOURSE:

- A: Apply Duochem 391 wearcourse with notched squeegee and roller at a minimum thickness of 500 microns (20 mils).
- B: Allow 8-16 hours of curing before proceeding to the application of subsequent coating.

3.08 TOPCOAT:

- A: Apply Duochem 6001 water based epoxy at a minimum dry mil thickness of 125 microns (5 mils).
- B: Allow topcoat to cure 48 hours before allowing traffic to resume on the coated surfaces.

3.09 CLEANING:

- A: Remove remaining materials and debris from site and dispose of according to rules and regulations.
- B: Uncured Duochem 390 can be cleaned with Duochem 208 or 205 Solvent and Duochem 6001 with warm water. Cured materials are unaffected by solvents or any cleaning chemicals; it will require grinding, chipping or scraping to be removed

END OF SECTION  
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