



- 1 LOW-PERM, WATER RESISTANT TILE BACKER SUBSTRATE
- 2 ADEX STANDARD MESH
- 3 HYDROFLEX AKRIL-GUARD BASECOAT/MEMBRANE
- 4 PRIMEX PRIMER
- 5 FINISH COAT

Description

The adex-POOL system is a barrier cladding application designed specifically for high-humidity locations such as interior swimming pool rooms. To help manage moisture vapour, the system is installed directly over a moisture resistant tile backer substrate and incorporates a low perm basecoat membrane. The adex-POOL finish system requires that an air-exchange system be in place to control the humidity levels within the room.

Benefits

- Durable and flexible
- Seamless substrate protection
- Architectural design flexibility
- Resists dirt, fading and abrasion
- Lightweight, durable, and repels moisture
- Prevents moisture vapour penetration through the wall assembly

Features

- Seamless substrate protection
- Unlimited colour selection
- Direct application
- Low-perm materials

Please refer to adex.ca for the latest version of this document, specifications (PDF + Word), technical drawings, product technical sheets, warranties, maintenance guide...and much more.

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PART 1 GENERAL

1.1 RELATED SECTIONS

1. Section 01 40 00: Quality Requirements
2. Section 03 30 00: Cast-in-Place Concrete
3. Section 04 20 00: Unit Masonry
4. Section 05 40 00: Cold-Formed Metal Framing
5. Section 06 10 00: Rough Carpentry
6. Section 07 20 00: Thermal Protection
7. Section 07 25 00: Weather Barriers (Vapour / Air Barriers)
8. Section 07 60 00: Flashing and Sheet Metal
9. Section 07 90 00: Joint Protection
10. Section 08 00 00: Openings
11. Section 09 28 00: Backing Boards and Underlayments
12. Section 09 90 00: Painting and Coating

1.2 DESCRIPTION

- 1.2.1 The adex-POOL finish system is a lightweight, direct coating system that provides durability, weather-fastness, and aesthetic value. The system is available in several textures and a wide range of colours. The system affords creative architectural design, with the use of reveals, battens and cornice details.
- 1.2.2 The adex-POOL system system consists of the following components:
- Tile backer (Coated glass-mat water-resistant gypsum board);
 - Fibreglass reinforcing mesh;
 - Co-polymer waterproof membrane/ basecoat;
 - Acrylic primer coat;
 - 100% acrylic polymer finish coat.

1.3 REFERENCE STANDARDS

- 1.3.1 ASTM International
- 1.3.1.1 ASTM B117: Standard Practice for Operating Salt Spray (Fog) Apparatus;
- 1.3.1.2 ASTM C666: Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing;
- 1.3.1.3 ASTM D522: Standard Test Methods for Mandrel Bend Test of

- Attached Organic Coatings;
- 1.3.1.4 ASTM D523: Standard Test Method for Specular Gloss;
- 1.3.1.5 ASTM D570: Standard Test Method for Water Absorption of Plastics;
- 1.3.1.6 ASTM D822: Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings;
- 1.3.1.7 ASTM D1623: Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics;
- 1.3.1.8 ASTM D2126: Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging;
- 1.3.1.9 ASTM D2370: Standard Test Method for Tensile Properties of Organic Coatings;
- 1.3.1.10 ASTM D2842: Standard Test Method for Water Absorption of Rigid Cellular Plastics;
- 1.3.1.11 ASTM D4541: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers;
- 1.3.1.12 ASTM D5034: Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test);
- 1.3.1.13 ASTM D5420: Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact);
- 1.3.1.14 ASTM E96: Standard Test Methods for Water Vapor Transmission of Materials;
- 1.3.1.15 ASTM E283: Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen;
- 1.3.1.16 ASTM E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference;
- 1.3.1.17 ASTM E331: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors,

and Curtain Walls by Uniform Static Air Pressure Difference;

- 1.3.1.18 ASTM E1131: Standard Test Method for Compositional Analysis by Thermogravimetry;
- 1.3.1.19 ASTM E1252: Standard Practice for General Techniques for Obtaining Infrared Spectra for Qualitative Analysis;
- 1.3.1.20 ASTM E2098: Standard Test Method for Determining Tensile Breaking Strength of Glass Fiber Reinforcing Mesh for Use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to a Sodium Hydroxide Solution;
- 1.3.1.21 ASTM G 155: Standard Practice for Operating-Xenon Arc Light Apparatus, for Exposure of Non-metallic Materials.
- 1.3.2 1.3.2CSA International
 - 1.3.2.1 CAN/CSA A3000: Cementitious materials compendium (Consists of A3001, A3002, A3003, A3004 and A3005).
- 1.3.3 National Research Council of Canada (NRC)
 - 1.3.3.1 Canadian Construction Materials Centre (CCMC): Technical Guide for EIFS.
- 1.3.4 Underwriters' Laboratories of Canada (ULC)
 - 1.3.4.1 CAN/ULC S102: Surface Burning Characteristics of Building Materials and Assemblies;
 - 1.3.4.2 CAN/ULC S114: Method for Determination of Non-Combustibility;

1.4 DESIGN REQUIREMENTS

- 1.4.1 All work undertaken must comply with the current codes and norms, best practice guides, as well as the manufacturer's installation instructions.
- 1.4.2 The substrate shall be engineered to withstand all applicable loads, including live, dead, seismic, suction, etc.
- 1.4.3 On horizontal surfaces, the minimum slope of the system shall be a 6:12 pitch with a maximum length of 250mm (10").
- 1.4.4 The substrate shall be protected with a waterproofing membrane sealed at all joints and openings.
- 1.4.5 The substrate shall be one of the following:
 - a) Brick, masonry or concrete;
 - b) Fibre cement board;
 - c) Glass-mat faced gypsum board;
 - d) Plywood or OSB board.
- 1.4.6 Expansion joints that allow for natural building movement shall be installed in the following locations:
 - 1.4.6.1 At expansion joints that occur in

the substrate;

- 1.4.6.2 At any abutment of the system with other materials;
- 1.4.6.3 Where the substrate changes;
- 1.4.6.4 Where significant structural movement occurs;
- 1.4.6.5 At a maximal distance of 10m (30ft), to counter thermal expansion;
- 1.4.6.6 Where deflections that might be in excess of L/240 are expected;
- 1.4.6.7 At the floor line in wood frame construction (may not be required when using engineered wood beams).
- 1.4.7 Expansion joints, or fire-breaks, shall extend through the EIFS and shall include proper flashing attached to the substrate (horizontal joints).

1.5 QUALITY ASSURANCE

- 1.5.1 Manufacturers
 - 1.5.1.1 EIFS manufacturer shall be Adex Systems Inc.
 - 1.5.1.2 Be a member of and in good standing with the EIFS Council of Canada.
 - 1.5.1.3 All other third-party material manufacturers shall be recognized by Adex Systems Inc.
- 1.5.2 Applicators
 - 1.5.2.1 Applicators shall have the necessary permits.
 - 1.5.2.2 Applicator shall have a minimum of (2) two-years of experience in applying EIFS systems and employ sufficient, knowledgeable personnel to complete work on schedule.
 - 1.5.2.3 Applicator shall follow all EIFS manufacturer's directions when installing system components.

1.6 DELIVERY & STORAGE

- 1.6.1 Deliver materials to the job site in their original unopened packages, clearly marked with the manufacturer's name, and description of contents.
- 1.6.2 Store in a clean, dry, well-ventilated area at a temperature not less than 5°C (41°F).
- 1.6.3 Protect materials from the elements of weather, and keep away from excessive heat (temperatures above 32°C (90°F)).

1.7 ARCHITECTURAL SAMPLES

- 1.7.1 Upon request, Adex or its distributor will provide a minimum 200mm x 200mm (8"x8") sample for colour and texture approval.
- 1.7.2 Do not start any final work until the Consultant gives final approval of sample(s).

1.8 JOB MOCK-UP

- 1.8.1 Construct a mock-up panel on site as part of the actual wall on an area as indicated by the Consultant. The approved mock-up panel shall form a standard for the project and no work of inferior quality will be accepted. The mock-up shall match sample panel(s) submitted to the Consultant as described in paragraph 1.7 of this Section.

1.9 JOB CONDITIONS

- 1.9.1 Ambient and surface temperatures shall be minimum 5°C (41°F) during installation.
- 1.9.2 When installing in climatic temperatures below 5°C (41°F), tarping, heating and ventilation shall be provided to maintain proper installation temperatures.
- 1.9.3 Ambient temperature shall be maintained above 5°C (41°F) for a minimum of 24 hours after installation to ensure that drying is complete. Allow for extended drying times in cool, higher humidity conditions.
- 1.9.4 Installation of Adex materials shall be co-ordinated with other construction trades.

1.10 ALTERNATIVES

- 1.10.1 Systems considered equivalent to adex-POOL shall be approved by the architect, in writing, at least ten (10) working days prior to the project bid date.

1.11 WARRANTY

- 1.11.1 Upon request, the manufacturer shall provide a (5) five-year limited warranty, stating that materials conform to specifications and are free of manufacturing defects.

PART 2 PRODUCTS

2.1 MANUFACTURER

- 2.1.1 All components of the adex-POOL system shall be obtained from Adex Systems Inc. or its authorised distributors. No substitution or addition of other material is permitted without written consent from the manufacturer.

2.2 PRODUCTS

- 2.2.1 Tile Backer Substrate
- 2.2.2 Shall be a gypsum-based product

with a water-resistant treated core and glass-mat moisture protective coatings on both sides. The front face shall be surfaced with a heat-cured co-polymer, water-resistant coating.

- 2.2.3 Shall conform to ASTM C1178 standards for Glass-Mat Faced Gypsum Backing Boards and meet the following specifications:
- a) Mold Resistance (ASTM D3273): 10, in a test as manufactured.
 - b) Vapour Permeance (ASTM E96): Not more than 1.0 US perm when tiled.
 - c) Robinson Floor Test Rating (ASTM C627): Light commercial.
- 2.2.4 Acceptable products include DensShield Tile Backer and DensShield Fireguard -Type X Tile Backer manufactured by Georgia Pacific Corporation.
- 2.2.5 Alternative tile backer products shall be approved in writing by Adex Systems inc. Inc.
- 2.2.6
- 2.2.7 Basecoat / Membrane
- 2.2.7.1 Shall be 100% acrylic, such as HYDROFLEX-GUARD (vapour retarder), mixed 1:1 by weight with Type GU cement;
- 2.2.7.2 Shall meet UEAct article 3.3.1.1 for water permeability;
- 2.2.7.3 Shall meet ASTM E-283 for air permeability;
- 2.2.7.4 Shall be supplied by Adex Systems Inc.
- 2.2.7.5 Design and location of all air and vapour barriers is the responsibility of the Design Professional and requires the use of transition membranes to join together all barrier components in the system.
- 2.2.8 Reinforcing Fibreglass Mesh
- 2.2.8.1 Shall be purchased from Adex Systems Inc. or from one of its authorised distributors.
- 2.2.8.2 Shall meet ASTM D-5034 standards;
- 2.2.8.3 Shall have different weights according to specific needs:
- a)QUICK TAPE MESH:
65g/m² (2 oz/yd²)
 - b)STARTER MESH:
150g/m² (4.5 oz/yd²)
 - c)STANDARD MESH (DESIGN):
150g/m² (4.5 oz/yd²)
 - d)STANDARD MESH PLUS:
190g/m² (6 oz/yd²)
 - e)INTERMEDIATE MESH:
375g/m² (11 oz/yd²)
 - f)ARMOUR MESH:500g/m²
(15 oz/yd²)
 - g)CORNER MESH:

305g/m² (9 oz/yd²)

2.2.9 Primer

2.2.9.1 Shall be a tinted, acrylic-based, roll-on priming agent, such as PRIMEX PRIMER, manufactured by Adex Systems Inc. PRIMEX PRIMER is not mandatory but highly recommended as it will enhance the depth of colour, increase the yield and enhance the longevity of the finish coat.

2.2.10 Finish Coat

2.2.10.1 Shall be a factory-mixed, 100% acrylic-based Adex Finish Coat, containing integral colour and texture.
 2.2.10.2 The texture shall be [See the Adex Specification Binder or visit www.adex.ca to view the various textures].

2.3 OTHER MATERIALS

2.3.1 Portland Cement

2.3.1.1 Shall be lump-free, Type GU (Type 10) Portland cement conforming to CSA-A3001 standards.

2.3.2 Water

2.3.2.1 Shall be clean, potable, and free of sediment.

2.3.3 Transition Membrane

2.3.3.1 Shall be a flexible, self-adhesive composite material tested for adhesion to itself and to Adex components. Suitable material includes Adex EIFS TAPE (4"-12" rolls) used with the appropriate primer or the A-FLEX SEALANT AND MESH. All other materials must be approved by Adex Systems Inc.

2.3.4 Backer Rod & Sealant

2.3.4.1 Refer to Section 07 90 00.
 2.3.4.2 Backer rod must be closed pore type.
 2.3.4.3 Use only low-modulus caulking with long service lives. Products should meet ASTM C1481 - 12 Standard Guide for Use of Joint Sealants with Exterior Insulation and Finish Systems (EIFS).

2.4 TESTS

2.4.1 Tests performed by an independent laboratory on the specified materials can be requested.

2.4.1.1 Properties shall meet or exceed the following values when tested by the methods listed:

DURABILITY UNDER CLIMATIC CONDITIONS: CCMC TG APPENDICE A2 (60 CYCLES)

No cracking, leaking or bubbling of base coat. No delamination or cracking of finish coat.

ACCELERATED WEATHER RESISTANCE: ASTM G155 (EXPOSED 2000 HOURS)

No deleterious effect.

SALT SPRAY RESISTANCE: ASTM-B117 (EXPOSED 300 HOURS)

No deleterious effect.

MILDEW AND FUNGUS RESISTANCE: CCMC 6.8

No mildew or fungal growth.

WATER PERMEABILITY: CCMC 6.6

≥ 2 hours.

WATER ABSORPTION: CCMC 6.7

≤ 20 %.

WATER VAPOUR TRANSMISSION: ASTM E96-95:

≥ 170 ng/Pa.s.m².

■ Test Method
 ■ Result

PART 3 EXECUTION

3.1 INSPECTION

- 3.1.1 Inspect the substrate to verify that it is structurally sound and solid, ensuring there are no irregular voids or projections.
- 3.1.2 Inspect all metal flashing to ensure that they are properly installed, making certain that moisture will be deflected to the exterior of the system.
- 3.1.3 The architect and general contractor shall be advised of any discrepancies. Work shall not proceed until unsatisfactory conditions are corrected.

3.2 PREPARATION

- 3.2.1 Ensure conduit pipes, cables and outlets are adequately covered before

TEST METHOD

commencing with installation.

- 3.2.2 Adjacent finish work (such as brick, siding, concrete, etc.) must be protected from damage during the installation of Adex materials.
- 3.2.3 Ensure the swimming pool is drained of water and that the relative humidity within the room is less than 60%.

3.3 MIXING

- 3.3.1 HYDROFLEX GUARD membrane
 - 3.3.1.1 Mix the contents of the HYDROFLEX pail until thoroughly blended. This will remove any settling of the contents due to storage.
 - 3.3.1.2 In a clean container, mix HYDROFLEX and Type GU Portland cement at a ratio (by weight) of one-to-one. Add Portland cement in small increments to prevent lumps from occurring.
 - 3.3.1.3 Allow mixture to set up for 5 minutes and mix again to break the initial set.
 - 3.3.1.4 Small amounts of water may be added to adjust the consistency. All other additives (such as rapid binder, anti-freeze, accelerator or others) are strictly prohibited.

3.4 INSTALLATION

- 3.4.1 Tile Backer Substrate
 - 3.4.1.1 Install Tile Backer as per manufacturer's specifications
- 3.4.2 Transition Membranes
 - 3.4.2.1 Ensure transition membranes (EIFS TAPE or A-FLEX SEALANT and MESH) are installed, sealing all junctions between the substrate and other materials (windows, wall penetrations, and dissimilar materials).
 - 3.4.2.2 Read the membrane data sheets for complete installation instructions.
- 3.4.3 Sheathing Joint Treatment
 - 3.4.3.1 Complete sheathing joint treatments as per the Weather Resistant Barrier (WRB) data sheets.
- 3.4.4 Membrane / Basecoat & Reinforcing Mesh
 - 3.4.4.1 Apply HYDROFLEX GUARD over the Dens-Shield tile backer surface to a uniform thickness of approximately 2 mm (5/16"). Work horizontally or vertically in strips of 1016mm (40"), and immediately embed Adex STANDARD MESH into the wet basecoat.
 - 3.4.4.2 Install an additional 300mm (12") long piece of STARTER/DETAIL MESH (at a 45°-degree angle) at the corners of all wall openings.
 - 3.4.4.3 STANDARD MESH shall be

double lapped not less than 200mm (8") at all corners and overlapped not less than 63mm (2.5") at mesh joints. Avoid wrinkles from forming in the mesh.

- 3.4.4.4 The final thickness of the HYDROFLEX GUARD shall be such that the REINFORCING MESH is fully embedded and not visible. Apply additional skim coats as required.
 - a) ARMOUR MESH is advised in high traffic areas (Optional).
 - b) Install ARMOUR MESH as per locations noted in the construction drawings.
 - c) Apply HYDROFLEX GUARD to the surface of the substrate to a thickness of 2.4mm (3/32") and embed ARMOUR MESH (vertical application is preferred). Smooth the surface until the mesh is fully embedded.
 - d) ARMOUR MESH shall be abutted and not lapped.
 - e) The ARMOUR MESH shall be installed to heights indicated in the plans.
 - f) All layers of ARMOUR MESH shall be covered with a layer of STANDARD MESH.
- 3.4.4.5 CORNER MESH is recommended at all major inside/outside corners (Optional). Install CORNER MESH on exposed interior/exterior corners as noted in the construction documents.
- 3.4.4.6 Allow the HYDROFLEX GUARD to dry before applying the primer and finish coat (24-hours).
- 3.4.5 Primer
 - 3.4.5.1 Apply an even coat of Adex PRIMEX PRIMER (tinted to the same colour as the finish coat) with a good-quality paintbrush, 10mm (3/8") nap roller, or sprayer.
 - 3.4.5.2 Allow PRIMEX PRIMER to dry before commencing with the Finish Coat.
- 3.4.6 Finish Coat
 - 3.4.6.1 Trowel-apply a tight coat of Adex Finish Coat, texture [see www.adex.ca or Adex Specification Binder] to a thickness not greater than the largest aggregate. Apply the finish coat with a stainless steel trowel in a continuous fashion, maintaining a wet edge. Levelling and texturing shall take place in one operation to give the Adex Finish Coat a uniform appearance.
 - 3.4.6.2 Avoid applications in direct sunlight.
 - 3.4.6.3 Avoid applying finish coat at locations where caulking will be installed.
 - 3.4.6.4 Weather conditions will be a

factor in the application and drying time of the Finish Coat.

3.4.7 Caulking

3.4.7.1 Refer to Section 07 90 00, Sealant.

3.4.7.2 Caulking shall be installed in a timely manner. Protect open joints from water intrusion during the construction period with backer rod until permanently sealed.

3.5 PROTECTION

3.5.1 Ensure that the general contractor protects all work against moisture infiltration and other damages by installing the necessary flashing and caulking in a timely manner.

3.5.2 Provide protection against dirt, moisture, high humidity, and freezing temperatures until materials are fully dry.

3.6 CLEAN UP

3.6.1 After completion, remove waste and leftover materials (used in this Section) from the job site.

3.6.2 Clean all adjacent materials and surfaces, and repair any defects to this application or any defects to any other work caused by this application, all to the approval of the consultant.

ALL REQUESTS FOR APPLICATION PROCEDURAL CHANGES MUST BE AUTHORIZED IN WRITING BY ADEX SYSTEMS INC.

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