

CSI SECTION 07 24 00

CSI SECTION 07 24 00 - EXTERIOR INSULATION & FINISH SYSTEM (EIFS) CSI SECTION 07 24 13 CLASS PB

SYSTEM OVERVIEW

The Standard System is a Class PB EIF System.

Surewall Standard EIFS is qualified for use on:

- noncombustible construction
- combustible non-residential construction
- fire resistance rated walls

This system is not qualified for use on wood-frame residential construction, including multi-unit. (Refer to Surewall Drainage EIFS - StuccoWrap™.)

- The system is not qualified for application to OSB (oriented strand board) sheathing.
- Some jurisdictions may require special inspections.
- The system does not contribute structural strength to the wall. It depends on the substrate wall for support and attachment.
- Substrate construction must resist all design loads. Sheathing attachment to framing must resist design negative windloads because it transfers those loads to the framing. Appropriate safety factors must be applied.
- All penetrations and terminations of the system must be made weather-tight, typically by sealants and/or flashings.

PART 1 - GENERAL

EDITOR NOTE: BELOW ARTICLE IS NOT INTENDED TO "SCOPE THE SECTION" OR IMPLY TRADE JURISDICTION.

1.01 SUMMARY

EDITOR NOTE: RETAIN BELOW PARAGRAPH AND MODIFY AS APPROPRIATE TO SUIT PROJECT REQUIREMENTS FOR EIFS APPLICATION TYPE. THE STANDARD EIFS IS AVAILABLE WITH EITHER A CEMENTITIOUS BASE COAT EIFS OR AN ACRYLIC BASE COAT EIFS.

A. Section Description: Section includes exterior insulation and finish system (EIFS - Class PB).

EDITOR NOTE: RETAIN BELOW EIFS FOR SUREWALL STANDARD EIFS, FIELD-APPLICATION.

1. EIFS Application Type: Field-applied EIFS.

EDITOR NOTE: DELETE BELOW IF NO PREFABRICATED PANELIZED EIFS REQUIRED FOR PROJECT. RETAIN BELOW FOR SUREWALL STANDARD EIFS, PANELIZED APPLICATION. IF RETAINED, COORDINATE REQUIRED SUBSTRATE MATERIAL AND METAL FRAMING SPECIFIED IN OTHER RELATED SECTIONS WITH THIS SECTION.

2. EIFS Application Type: Prefabricated panelized EIFS.

EDITOR NOTE: COORDINATE BELOW WITH PROJECT REQUIREMENTS AND CONTRACT CONDITIONS.

B. Products Installed But Not Supplied Under This Section:

1. EIFS Joint Sealant: Refer to Division 7 Joint Treatment (Sealants) Section. Installation of EIFS Joint sealant shall be by EIFS applicator or a separate installer under direct supervision and control of EIFS applicator. EIFS Joint Sealant installer shall be experienced and competent in the installation of elastomeric construction sealants.

EDITOR NOTE: REVISE BELOW TO SUIT PROJECT REQUIREMENTS AND SPECIFICATION PREPARATION REQUIREMENTS. ADD SECTION NUMBERS PER CSI "MASTERFORMAT" AND OFFICE SPECIFICATION PRACTICES.

C. Related Sections:

1. Division 03 - Concrete Section
2. Division 04 - Unit Masonry Section.
3. Division 05 - Light Gauge Cold-Formed Steel Framing Section.
4. Division 06 - Carpentry Section for Sheathing.
5. Division 07 - Flashing Section.
6. Division 07 - Joint Sealant Section.
7. Division 09 - Portland Cement Plaster.
8. Division 09 - Specialty Coatings.

1.02 DEFINITIONS

A. Definitions:

1. Field Applied Application: EIFS applied to substrate in final position on the structure.
2. Prefabricated Panelized Application: Panels prefabricated away from final position on the structure and later installed on the structure. Surewall Standard EIFS panelized application consists of the Surewall Standard EIFS as applied to light gauge steel framing and fastened sheathing substrate.
3. Backwrapping: Continuation of base coat and fiberglass reinforcing fabric around the edge of insulation board and onto the substrate in back of the insulation.
4. Edgewrapping: Continuation of base coated fiberglass reinforcing fabric around the edge of the insulation board and onto the rough opening wall framing or masonry.
5. Expansion Joint: Sealant, back-up material and primer manufactured by others, forming a moveable juncture between adjacent materials.

1.03 SYSTEM DESCRIPTION

EDITORS NOTE: RETAIN BELOW AND SELECT EIF SYSTEM AS APPROPRIATE TO PROJECT REQUIREMENTS.

A. Description of Surewall Standard EIFS:

1. Surewall Standard EIFS with Cementitious Base Coat: An Exterior Insulation and Finish System (EIFS) consisting of Expanded Polystyrene Insulation (EPS) Board, Adhesive, Cementitious Base Coat with embedded Reinforcing Fabric Mesh, Primer (Optional), and Finish Coat.

B. Surewall EIF System Functional Criteria:

1. General:
 - a. Insulation Board: At system termination, completely encapsulate insulation board edges by mesh reinforced base coat, substrate, or Surewall track. The use of and maximum thickness of insulation board shall be in accordance with applicable building codes and ParexLahabra requirements.
 - b. Inclined surfaces shall follow guidelines listed below:
 - 1) Minimum slope: 6 in. (152mm) of vertical rise in 12 in. (305mm) of horizontal run.
 - 2) For sloped surfaces, run of slope shall be a maximum of 12 in.(305mm).
 - 3) Usage not meeting above criteria shall be approved in writing by ParexLahabra prior to installation.
 - c. Flashing: Flashing shall be continuous and watertight. Flashing shall be designed and installed to prevent water infiltration behind EIFS. Refer to Division 7 Flashing Section for specified flashing materials.
2. Substrate Systems:
 - a. Shall be engineered to withstand applicable design loads including required safety factor.
 - b. Maximum deflection of substrate system under positive or negative design loads shall not exceed 1/240 of span except as otherwise approved in writing by ParexLaHabra prior to installation.
 - c. Substrate Dimensional Tolerances: Flat within 1/4 in. (6.4mm) within any 4 ft. (1219mm) radius.
 - d. Surface irregularities: Sheathing not over 1/8 in. (3mm); masonry not over 3/16 in. (4.8mm).
 - e. EPS board shall be separated from the interior of the building by 1/2 in. (12.7mm) gypsum board or equivalent approved 15 minute thermal barrier.

EDITOR NOTE: COORDINATE BELOW IMPACT RESISTANCE CLASSIFICATION REQUIREMENTS RECOMMENDED BY EIFS INDUSTRY MEMBERS ASSOCIATION TEST METHOD AND STANDARD 101.86 - "STANDARD TEST METHOD FOR RESISTANCE OF EXTERIOR INSULATION FINISH SYSTEMS TO THE EFFECTS OF RAPID DEFORMATION (IMPACT)" - WITH SECTION REQUIREMENTS FOR EIFS REINFORCEMENT MESH. REVISE BELOW WITH OTHER AVAILABLE CLASSIFICATIONS AND IMPACT RANGES.

Surewall Standard EIFS

3. Impact Resistance Classification: Surewall Standard EIFS shall be classified in accordance with EIMA for EIFS classification and impact ranges as follows:
 - a. Standard Impact Resistance, 25-49 in.lbs.(2.8 –5.6J) Impact Range.
4. Expansion Joints: Continuous expansion joints shall be installed at the following locations:
 - a. At building expansion joints.
 - b. At substrate expansion joints.
 - c. At floor lines in wood frame construction.
 - d. Where Surewall EIF System panels abut one another.
 - e. Where Surewall EIF System abuts other materials.
 - f. Where significant structural movement occurs, such as at:
 - 1) Changes in roof line.
 - 2) Changes in building shape and/or structural system.
 - g. Where substrate changes
(For exceptions to joints at substrate changes, contact the ParexLahabra Technical Department)

EDITOR NOTE: INDICATE JOINT WIDTH ON DRAWINGS FOR MOVEMENT AND EXPANSION AND CONTRACTION CONDITIONS. CONSULT WITH SEALANT MANUFACTURER FOR JOINT DESIGN RECOMMENDATIONS AND WITH EIFS MANUFACTURER FOR COORDINATION OF EIFS MATERIALS.

- h. Substrate movement and expansion and contraction of Surewall EIF System and adjacent materials shall be taken into account in design of expansion joints, with proper consideration given to sealant properties, installation conditions, temperature range, coefficients of expansion of materials, joint width to depth ratios, and other material factors. Minimum width of expansion joints shall be as follows:
 - 1) 1/2 in. (12.7mm) where EIFS abuts other materials.
 - 2) 3/4 in. (19mm) when EIFS abuts EIFS.
 - 3) Larger width where indicated on drawings.
5. Manufacturer's Details:
 - a. Surewall EIFS System latest published information shall be followed for standard detail treatments.
 - b. Non-standard detail treatments shall be as recommended by ParexLahabra, approved by Architect and be part of the Contract Documents.
6. Building Code Conformance: Surewall EIF System shall be acceptable for use on this project under building code having jurisdiction.

1.04 SUBMITTALS

- A. Samples:
 1. Verification Sample: Submit verification samples of EIFS of size to represent each color and texture to be utilized on project. Each sample shall be made using same tools and techniques as required for actual application. Samples shall be available and maintained at job site.
- B. Reports and Certificates:
 1. Test Reports: Submit, when requested, selected test reports by independent laboratories verifying performance of EIF System.
 2. Applicator Certificate: Submit, when requested, a copy of applicator current certificate of education from the manufacturer.

1.05 QUALITY ASSURANCE

- A. Qualifications:
 1. Manufacturer:
 - a. Shall have marketed Exterior Insulation and Finish Systems in United States for at least ten years.
 - b. At least 1,000 projects shall have been completed utilizing this Exterior Insulation and Finish System.
 - c. Shall have completed projects of same building size and type as this project.
 2. EIFS Applicator:
 - a. Shall have attended a Surewall Educational Seminar for installation of system.
 - b. Shall possess a current certificate of education.
 - c. Shall be experienced and competent in installation of plaster-like materials.
- B. Regulatory Requirements:
 1. Insulation Board: Shall be produced and labeled under a third party quality program as required by applicable building code.

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1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver EIFS materials supplied by Surewall to site location in original unopened containers with labels intact. Upon arrival, materials shall be inspected for damage, and manufacturer notified of any discrepancies. Unsatisfactory materials shall not be used.
- B. Storage: Store EIFS materials supplied by Surewall in a cool, dry location, out of sunlight, protected from weather and other harmful environment, and at a temperature above 40°F (4°C) and below 110°F (43°C) in accordance with manufacturer's instructions.

1.07 PROJECT / SITE CONDITIONS

- A. Environmental Conditions: In accordance with manufacturer's requirements, comply with:
 - 1. Ambient air temperature: Minimum 40°F (4°C) or higher, and remain so for 24 hours thereafter.
 - 2. Do not apply Surewall EIF System materials to substrates whose temperature is below 40°F (4°C).
 - 3. Do not apply Surewall EIF System during inclement weather unless appropriate protection is employed.
 - 4. Protect Surewall EIF System materials from weather and other damage.

1.08 WARRANTY

- A. Warranty: Upon request, at completion of installation provide Surewall Standard Limited Warranty.

1.09 MAINTENANCE

- A. Maintenance Instructions: At completion of EIFS installation, provide manufacturer's maintenance instructions for EIFS installed.
 - 1. Refer to Division 1 General Requirements for requirements for submitting maintenance documentation.

PART 2 - PRODUCTS

EDITOR NOTE: RETAIN BELOW ARTICLE FOR PROPRIETARY SPECIFICATION. DO NOT USE PHRASE "OR EQUAL" / "OR APPROVED EQUAL." USE OF SUCH PHRASES REQUIRES DETAILED PROCEDURES SPECIFIED IN A DIVISION 1 GENERAL REQUIREMENTS SECTION ON ENFORCEMENT OF "OR EQUAL" POLICY, AND REQUIRES CLARIFICATION DUE TO DIFFERENT INTERPRETATION BY VARIOUS CONTRACTING PARTIES.

2.01 MANUFACTURERS

- A. Manufacturer: ParexLahabra, Inc. 4125 E. La Palma Ave. Suite 250, Anaheim, CA 92807

- 1. System: Surewall Standard EIFS
 - a. Base Coat: Flex, Prime-A-Flex Base Coat

EDITOR NOTE: COORDINATE BELOW WITH PROJECT REQUIREMENTS.

- b. Mesh Reinforcement: Locations to achieve impact strength shall be as follows:
 - 1) Locations (Not Noted Otherwise): EIMA Impact Classification: Standard.

EDITOR NOTE: RETAIN BELOW AND SPECIFY LOCATION TO RECEIVE EIFS WITH HIGHER THAN STANDARD IMPACT RESISTANCE CLASSIFICATION.

2) Locations: _____ ; EIMA Impact Classification: _____

EDITOR NOTE: CONSULT WITH SUREWALL AND COORDINATE BELOW TRACKS, AND BACKWRAPPING WITH REQUIREMENTS FOR PROJECT CONDITIONS.

- c. Track: as required for EIFS.
- 2. Surewall System Finish:

EDITOR NOTE: SPECIFY BELOW TYPES FROM MANUFACTURER'S TEXTURE FINISHES AND COLORS. REFER TO SUREWALL PRODUCT BINDER FOR FINISH TYPE, TEXTURE, AND COLOR SELECTION.

- a. Type: _____
- b. Texture: _____
- c. Color: _____

- 3. Product Performance Requirements: Refer to Product Performance Sheet as an attachment herein.
- B. Components: Obtain components of Surewall EIF System from Surewall or its authorized distributors. No substitutions or additions of other materials shall be permitted without prior written permission for this project from ParexLahabra.
- C. Substitutions: Refer to Division 1 General Requirements section for provision regarding product substitutions.
- D. Alternative Manufacturers: Alternative systems to be considered equal to those specified herein shall be approved by Architect in writing in accordance with bidding requirements and provisions of contract documents.

2.02 SUREWALL STANDARD EIFS MATERIALS

A. Surewall Adhesives:

1. Prime-A-Flex Base Coat: 100% acrylic polymer based, requiring the addition of Portland cement; used as an adhesive to laminate EPS Insulation Board to appropriate substrates.
2. Flex Base Coat: Copolymer based, factory blend of cement and proprietary ingredients; used as an adhesive to laminate EPS Insulation Board to appropriate substrates.
3. Mastic Adhesive: 100% acrylic polymer based; ready to use, applied without the addition of cement; used as an adhesive to laminate EPS Insulation Board to appropriate substrates.

B. EIFS Insulation Board: Expanded Polystyrene (EPS) Insulation Board:

1. Produced by and labeled under a third party quality program as required by applicable building code; and produced by a manufacturer approved by ParexLahabra.
2. Material Standard: ASTM C-578, Type I and conforming to EIMA Guideline Specifications for Expanded Polystyrene (EPS) board.
3. Size: 2 ft. x 4 ft. (610mm x 1219mm) maximum.
4. Thickness: 3/4 in. (19mm), minimum.

C. Surewall Base Coat:

1. Prime-A-Flex Base Coat: 100% acrylic polymer base, requiring the addition of Portland cement.
2. Flex Base Coat: Copolymer based, factory blend of cement and proprietary ingredients.

EDITOR NOTE: RETAIN BELOW STANDARD MESH FOR SUREWALL STANDARD EIFS FOR STANDARD IMPACT RESISTANCE CLASSIFICATION.

D. Surewall Reinforcing Mesh:

1. Standard Mesh: Weight 4.5 oz. per sq.yd (153g/m²) coated for protection against alkali. Standard reinforcement of Surewall EIFS, or for use with either Medium Impact Mesh or Heavy Mesh.
2. Detail Mesh: Reinforcing mesh used for backwrapping and details.

EDITOR NOTE: RETAIN BELOW MESH REQUIREMENTS AFTER DETERMINATION OF IMPACT RESISTANCE CLASSIFICATION.

3. Medium Impact Mesh: Weight 15 oz. per sq.yd. (509g/m²) Reinforcing mesh used with Surewall EIFS Standard System; to achieve EIMA high impact strength.
4. Heavy Mesh: Weight 20 oz. per sq.yd. (678g/m²) Reinforcing mesh used with Surewall EIFS Standard System; to achieve ultra-high impact strength.

E. Surewall Primers:

1. Pre-Coat Acrylic Primer: 100% acrylic based coating to prepare surfaces for Surewall finishes.

F. Surewall Finish Coat: Factory blended, 100% acrylic polymer based finish, integrally colored. Finish type, texture and color as selected by Architect.

G. Surewall Track: PVC plastic accessory, used for termination of Surewall EIFS in lieu of backwrapping; provides straight termination and joint lines; facilitates sealant maintenance; Surewall Track.

H. Water: Shall be cool, clean, potable and free of foreign matter; utilized to adjust workability.

I. Portland Cement: Conforming to ASTM C 150, Type I or I-II, fresh and free of lumps.

2.03 RELATED MATERIALS

A. Sheathing:

1. Gypsum Sheathing shall conform to ASTM C 79 or Glass Mat Gypsum Sheathing shall conform to ASTM C 1177.
2. Cement Fiber Sheathing conforming to ASTM C 1186.
3. Plywood shall be no less than 7/16 in. (11mm) thick, minimum 4-ply APA-Engineered Wood Association Exposure 1 or Exterior grade C-D or better. Plywood shall be installed with C or better side in contact with Surewall Mastic Adhesive.
4. Comply with APA-Engineered Wood Association spacing recommendations of 1/8in. (3.2mm) for edge and end joints of plywood.
5. Sheathing shall be protected from weather before, during and after application of Surewall EIFS.

B. Flashing: Refer to Division 7 Flashing Section for flashing materials.

C. Sealant System:

1. Sealant for expansion joints between panelized Surewall EIFS System sections shall be ultra-low modulus designed for minimum 100% elongation and minimum 50% compression and as selected by Architect.
2. Sealant for perimeter seals around window and door frames and other wall penetrations shall be low modulus, designed for minimum 50% elongation and minimum 25% compression, and as selected by Architect.
3. Sealants shall conform to ASTM C 920, Grade NS.
4. Expansion joints between sections of Surewall EIF System shall have a minimum width of 3/4 in. (19-mm).
5. Perimeter seal joints shall be a minimum width of 1/2 in. (12.7mm).
6. Sealant backer rod shall be closed-cell polyethylene foam.
7. Apply sealant to tracks or base coat of Surewall EIF System.

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8. Refer to Surewall current bulletin for listing of sealants which have been tested and have been found to be compatible with Surewall EIF System by their manufacturer.
9. Color shall be as selected by Architect.
10. Joint design, surface preparation, and sealant primer shall be based on sealant manufacturer's recommendations and project conditions.

EDITOR NOTE: PART 3 EXECUTION BELOW INVOLVES ONSITE WORK AND SHOULD INCLUDE PROVISIONS FOR INCORPORATING MATERIALS AND PRODUCTS INTO PROJECT. TYPICALLY, "CONDITIONS OF THE CONTRACT" ESTABLISH RESPONSIBILITY FOR "MEANS, METHODS, TECHNIQUES, AND SAFETY" REQUIREMENTS OF CONSTRUCTION WITH CONTRACTOR. SPECIFICATIONS SHOULD AVOID CONFLICTS WITH THIS CONTRACTUAL PRINCIPLE.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's instructions for installation of exterior insulation & finish system.

3.02 EXAMINATION

- A. Examination of Substrate:
 1. Prior to installation of Surewall EIF System, examine substrate as follows:
 - a. Substrate shall be of a type approved by Surewall.
 - b. Substrate shall be examined for soundness, such as tightness of connections, crumbling or looseness of surface, voids and projections, spacing of panels, and other conditions.
 - c. Substrate shall be examined for dimensional tolerances per this specification.
 - d. Substrate surface shall be free of foreign materials such as oil, dust, dirt, form release agents, paint, wax, water, frost, and other harmful materials.
 2. Advise Contractor of discrepancies preventing installation of a manufacturer's warranty EIFS. Do not proceed with EIFS work until unsatisfactory conditions are corrected.
 3. Correction of unsatisfactory conditions of substrates installed by other trades shall be responsibility of Contractor.

3.03 PROTECTION AND COORDINATION

- A. Protection: Protect surrounding material surfaces and areas during installation of Surewall EIF System. Protect Surewall EIF System from weather and other damage immediately after installation and until installation of sealants and flashing.
- B. Coordination:
 1. Coordinate installation of Surewall EIF System with other construction trades.
 2. Ensure a continuous EIFS operation, free of cold joints, scaffolding lines, texture variations, and other non-complying installation procedures.
 3. Promptly flash and/or seal system terminations to prevent water infiltration. Use temporary cover when permanent flashing or sealant installation is delayed.
 4. Immediately cover tops of walls to prevent water infiltration.
 5. Upon full cure of Surewall EIF System, promptly install sealant to surfaces to be sealed.

REMINDER: SUREWALL STANDARD EIFS IS A WEATHER BARRIER TYPE OF SYSTEM. SYSTEM PERFORMANCE IS DEPENDENT UPON, AMONG OTHER FACTORS, IMPORTANCE OF PROPER FLASHING AND JOINT SEALING, AND ATTENTION TO PROPER FLASHING AND JOINT SEALANT DETAILS INDICATED ON DRAWINGS.

3.04 INSTALLATION

- A. General: Installation shall conform to this specification and Surewall EIFS written instructions.
 1. Install tracks, back-wrap mesh, or edge-wrap mesh at system terminations.
 2. Apply adhesive to backs of insulation boards with a Surewall notched trowel.
 3. Install insulation board without gaps in a running bond pattern and interlocked at corners.
 4. Rasp irregularities off insulation board.
 5. Apply base coat and fully embed mesh in base coat; include diagonal mesh patches at corners of openings and reinforcing mesh patches at joints of track sections. Apply multiple layers of base coat and mesh where required for specified impact resistance classification.
 6. Apply primer to base coat after drying. Primer may be omitted if it is not required by the manufacturer's product data sheets for the specified finish coat.
 7. Finish Coat: Apply finish coat to match specified finish type, texture, and color.
 8. Install sealant in accordance with Surewall instructions. Apply sealant to base coat.

3.05 CLEANUP

- A. General: Remove excess and waste EIFS materials from job site.
 - 1. Clean EIFS surfaces and work area of foreign materials resulting from EIFS operations.

END OF SECTION

Disclaimer

This guide specification is intended for use by a qualified designer. The guide specification is not intended to be used verbatim as an actual specification without appropriate modifications for the specific use intended. The guide specification must be integrated into and coordinated with the procedures of each design firm, and the requirements of a specific project.

PRODUCT PERFORMANCE SHEET

FIRE PERFORMANCE

TEST	METHOD	SUREWALL STANDARD EIFS
Full-Scale Multi-Story Fire Evaluation	UBC. 26-4	Pass
Surface Burning Characteristics of Coatings	ASTM E 84	Flame Spread: 0 to 15, Smoke Developed: 0 to 15
Large-Scale Vertical Fire Spread	Modified ASTM E 108	No vertical or horizontal flame spread. Prevented fire involvement of insulation core.
Fire Resistance	ASTM E 119 1, 2, & 3 hour assembly	Type PB System: Standard fire-resistive assembly rating maintained.
Radiant Heat Exposure	NFPA 268	Pass: 1" to 4" EPS

STRENGTH

TEST	METHOD	SUREWALL STANDARD EIFS
Transverse Wind Load Resistance	ASTM E 330	Negative Wind Load: 150psf (7182 Pa). No failure of system. Failure in gypsum sheathing substrate.
Impact Load	ASTM E 695	30lb (13.6kg) impact mass; no cracking of system, 4.8 mm dent depth
Gardner Impact Test EIMA 101.86	ASTM D 2794	25 to 200 in.lb (2.8 to 22.6J), (depending on mesh weight)
Falling Ball Impact	ASTM D 1037	92 to over 600 in.lb (10.4 to > 67.8J)
Tensile Bond Strength	ASTM C 297	26psi (179kPa) to insulation board
Creep Resistance of Adhesive	ASTM D 2294	28 days: 208psf (10kPa) shear stress; no creep
Flexural Strength	ASTM C 203	60.6psi (418kPa)

ENVIRONMENTAL DURABILITY

TEST	METHOD	SUREWALL STANDARD EIFS
Accelerated Weathering	ASTM G 23 ASTM G 53	2000 hours: no deleterious effect 2000 hours: no deleterious effect
Wind-Driven Rain	F.S. TT-C-555B	24 hours; no penetration of water
Water Penetration EIMA 101.02	ASTM E 331	Pass
Freeze-Thaw Resistance EIMA 101.01	ASTM C 67 UBC Acceptance Criterion	60 cycles: no deterioration 10 cycles: pass
Salt Fog Resistance	ASTM B 117	500 hours: no deterioration
Moisture Resistance	ASTM D 2247	14 days: no deleterious effect
Abrasion Resistance	ASTM D 968	500 liters: no deleterious effect
Fungus Resistance	MIL STD 810B	28 days: no growth
Mildew Resistance	ASTM D 3273	35 days: no growth

Where several tests on different materials are summarized, a range of values is shown. This summary has been prepared to provide quick but partial information on how certain combinations of Surewall products perform during certain tests. It is not a complete description of the test procedures or of the results thereof. Surewall will mail copies of original test reports at no charge on request. Please contact Surewall if further information is required.



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