CODE EVALUATION REPORT

CERUS-1011

PUBLISHED: May 2023
REVISED: March 2025
EXPIRATION: March 2030

PRODUCT: **EF-400 FOUNDATION WATERPROOFING**

REPORT HOLDER: Seaboard Asphalt Products Company

CONTACT DETAILS: 3601 Fairfield Road
Baltimore, Maryland
21226 USA

CSI DIVISION: **07 00 00 – Thermal and Moisture Protection**

CSI SECTION: 07 14 16 – Cold Fluid-Applied Waterproofing

APPLICABLE CODES: 2021, 2018, 2015 International Building Code (IBC)
2021, 2018, 2015 International Residential Code (IRC)
2020, 2015 ICC 700 National Green Building Standard® (ICC 700)

EVALUATED: Waterproofing Properties.

IAS ACCREDITED Product Certification Agency PCA-118

1.0 APPROVED FOR FOLLOWING:

APPROVED TYPES OF CONSTRUCTION:	Types I-VA/B
APPROVED USE:	Exterior foundation wall applications.
APPROVED INSTALLATIONS:	Below grade foundation walls in areas where hydrostatic pressure conditions exist.

2.0 DESCRIPTION:

2.1 General:

Seaboard EF-400 is an asphalt-based latex modified clay emulsion coating that when applied to exterior surfaces of concrete or masonry foundation walls, provides waterproofing in areas where; a) ground-water investigation per 2021 / 2018 / 2015 IBC Section 1803.5.4 determines hydrostatic pressure conditions exist or b) where a high water table or other severe soil-water conditions are known to exist per 2021 / 2018 / 2015 IRC Section R406.2. EF-400 complies with the 2021 / 2018 / 2015 IBC Section 1805.3.2 and 2021 / 2018 / 2015 IRC Section R406.2 when installed at ≥ 60-mils (0.030 inches / 1.02 mm) applied thickness as a polymer-modified asphalt for applications requiring waterproofing resistance to maximum 2.5 psi hydrostatic pressure where cracks are of maximum 1/16 inches (1.6 mm) in width.

Seaboard EF-400 complies with 2020 / 2015 ICC 700 Section 602.1.2 as enhanced foundation waterproofing.

EF-400 is available in 1-gallon (3.8 L), 5-gallons (19 L), 55-gallons (209 L) and 275-gallons (1045 L) containers. Alternate volumes are available on request.

This report does not preclude the use of Seaboard EF-400 in above grade waterproofing applications. When used in above grade applications, Seaboard EF-400 use shall be in accordance with the applicable codes and the manufacturer's published installation instructions. This application is outside the scope of this report.

3.0 DESIGN:

EF-400 does not require design. Use of EF-400 shall be in conditions where the ground-water investigation has identified hydrostatic pressure conditions exist of 2.5 psi (17.2 kPa) or less, and where cracks are of 1/16 inches (1.6 mm) width or less.

4.0 INSTALLATIONS:

4.1 General:

Installation of EF-400 must comply with the manufacturer's published installation instructions, this report and the applicable code(s). Where differences are found between documents, this report and the applicable building code shall govern.

EF-400 used as below grade waterproofing shall be installed over concrete or masonry foundation walls in accordance with 2021 / 2018 / 2015 IBC Section 1805.3.2 and 2021 / 2018 / 2015 IRC Section R406.2. Design of the foundation walls for resisting hydrostatic pressures and lateral loading is outside the scope of this report. Design of foundation walls shall be in accordance with the applicable code.

4.1.1 Special Inspection:

Use of EF-400 does not require special inspection.

4.2 Application:

Prior to application of EF-400, the foundation walls shall be fully cured and dry. Surfaces are to be clean of foreign debris and free of cracks and voids greater than 1/16 inches (1.6 mm) in size. Where voids or cracks of greater size are present, the areas of deficiency shall be patched with non-shrinking grout or mastic asphalt. The patching agent shall be allowed to fully cure before the application of EF-400.

EF-400 can be spray-applied, or cold fluid-applied to the foundation walls to a minimum 60-mils (0.030 inches / 1.02 mm) EF-400 total thickness at an application rate of 25 ft^2/gallon (0.61 m^2/L). EF-400 is to be installed uniformly across the entire foundation wall surface from the bottom of wall to a minimum of 12 inches (305 mm) above the maximum elevation of the ground-water table for structures governed by the 2021 / 2018 / 2015 IBC or 6 inches (152 mm) above water table for structures governed by the 2021 / 2018 / 2015 IRC. EF-400 is to be protected from freezing but can be applied at ambient temperatures of > 26°F (-3°C). After application, EF-400 shall be allowed to fully cure before the application of backfill or any additional coverings where potential exists to inhibit the EF-400 curing process. Where backfill has potential for puncture or damage to EF-400 after installation, protective boards or other means of protection are to be provided to ensure integrity of the continuous EF-400 coating.

4.2 Storage:

EF-400 has a shelf-life of 12 months.

5.0 LIMITATIONS

- EF-400 is to be used in applications where the maximum service hydrostatic pressure is 2.5 psi (17.2 kPa).
- EF-400 is to be installed at a minimum 60-mils (0.030 inches / 1.02 mm) wet film thickness.
- Installation of EF-400 is to be at ambient temperatures > 26^{0}F (-3°C) at times when no precipitation is imminent.
- Installation of EF-400 is to be in accordance with the manufacturer's published installation instructions, Section 4.2 of this report, and the applicable code(s). Where differences between documents are found, this report and the applicable code(s) govern.
- Installation of EF-400 is limited for use over fully cured foundation walls.
- Application of backfill is to occur after EF-400 is fully cured (24-hours after application).
- EF-400 is manufactured in Baltimore, MD with inspections by QAI Laboratories.

6.0 SUPPORTING INFORMATION:

The following data has been submitted for evaluation of EF-400 waterproofing coating:

- Compliant data in accordance with ICC-ES AC29 including the following:
  - Hydrostatic Pressure Resistance (rapid and long-term) in accordance with ASTM C1306.
  - Low-Temperature Flexibility and Crack Bridging in accordance with ASTM C836.
  - Adhesion to Concrete and Masonry in accordance with ASTM C836.
  - Extensibility after Heat Aging in accordance with ASTM C836.
  - Resistance to Water in accordance with ASTM D2939.
  - Water Vapor Permeance in accordance with ASTM E96.

7.0 MARKING:

EF-400 finished products are labeled with the product name (EF-400), manufacturer's name (Seaboard Asphalt Products Company), location of manufacture, and the QAI CER-1011.

An example EF-400 label is outlined in Figure 1 below.

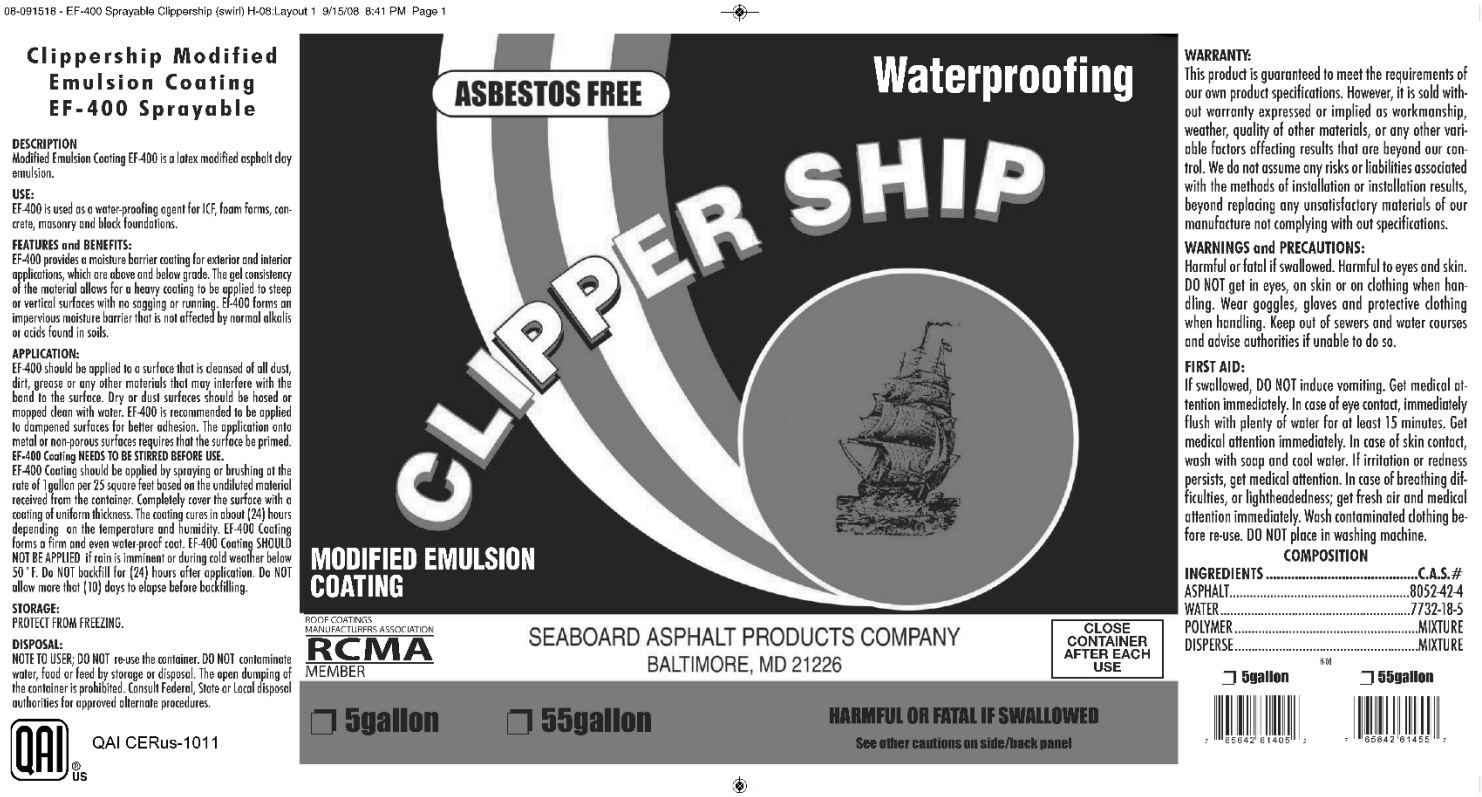

Figure 1. EF-400 Finished Product Label

11.0 ELIGIBILITY OF REPORT

QAI's Code Evaluation Report complies with the 2021 / 2018 / 2015 IBC Section 104.11 *Alternative materials, design and methods of construction and equipment* subsection 104.11.1 *Research Reports*. Supporting data has been evaluated by QAI for compliance of the noted materials and assemblies to the applicable code by QAI, and *approved* source as detailed below.

The attached report has been reviewed by a QAI Registered Professional Engineer approved by the specific state Board of Professional Engineers noted on the specific P.E. seal(s).

Per section 1703 of the IBC, QAI is an independent third-party testing, inspection and certification agency accredited by the International Accreditation Service, Inc. (IAS) for this specific scope (see IAS PCA-118). QAI can confirm that based on its IAS accreditation it meets IBC Section 1703.1 on Independence, Section 1703.1.2 on Equipment and Section 1703.1 on Personnel.

This Evaluation report has been designed to meet the performance requirements of IBC Section 1703.4 and contains the required information to show the product, material or assembly meets the applicable code requirements.

The product is labeled per section IBC 1703 and subject to follow-up inspection per IBC 1703.6 using QAI IAS accredited ISO/IEC 17020 inspection program (see IAS AA-723).

For more information regarding QAI Laboratories, please visit www.qai.org.

The above is an example of the QAI registered Listing mark. The Listing mark may only be used by the Report Holder per the QAI service agreement on products defined in this report. The 'us' indicator in the 4 o'clock position indicates the product complies with the properties evaluated with limitations outlined in this report for use in the US market. A 'c' indicator in the 4 o'clock position indicates the product has been evaluated for use in the Canadian market.

IAS ACCREDITED Product Certification Agency PCA-118

11.0 REFERENCED STANDARDS

ICC-ES AC29 *Acceptance Criteria for Cold, Liquid-Applied, Below-Grade, Exterior Damproofing and Waterproofing Materials* (ICC-ES AC29).
ASTM C1306 *Standard test Method for Hydrostatic Pressure Resistance of a Liquid-Applied Waterproofing Membrane* (ASTM C1306).
ASTM C836 *Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course* (ASTM C836).
ASTM D2939 *Standard Test Methos for Emulsified Bitumens Used as Protective Coatings* (ASTM D2939).
ASTM E96 *Standard Test Methods for Water Vapor Transmission of Materials* (ASTM E96).