

# ETERNAL STEP TECHNICAL DATA

## 1. PRODUCT NAME / MANUFACTURER

### 1.1 Product:

Eternal Step vinyl sheet resilient floor covering

### 1.2 Manufacturer:

Forbo Flooring Systems  
 Humboldt Industrial Park  
 Hazleton, PA 18202  
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### 1.3 Product Description:

Construction: Eternal Step vinyl sheet floor covering is a heterogeneous product with a compact calendared backing and a flexible reinforced glass fleece innerlayer for dimensional stability. The scratch resistant PUR wearlayer contains colorfast pigments, transparent PVC chips and carborundum granules.

### 1.4 Physical Characteristics: (dimensions are approximate)

Gauge----- 0.080" (2.0 mm)  
 Width ----- 79" (2 meters)  
 Wear layer ----- 0.0275" (0.7 mm)  
 Length ----- 82' (25 meters)  
 Roll Size ----- 60 yards<sup>2</sup> (50 meters<sup>2</sup>)

## 2. PRODUCT PERFORMANCE AND TECHNICAL DATA

### 2.1 Reference Specification:

Meets or exceeds all technical requirements as set forth in ASTM F 1303, Standard Specification for Vinyl Sheet Floor Covering with Backing

Type 1, Grade 1, Class B Backing

### 2.2 Environmental:

Compliant with CHPS 01350 requirements for VOC emissions and indoor air quality.

Contributes to the following LEED® v4 credits:

#### Materials & Resources

Credit 4, Option 1: See Forbo's LEED v4 sheet for additional information.

Credit 4, Option 2: Recycled Content (18% Pre-Consumer)

Prerequisite 2: 100% Recyclable Core and Stopper

#### Indoor Environmental Quality

Credit 2: Low-Emitting Materials ([www.chps.net](http://www.chps.net))

Credit 2: Low-Emitting Materials (Adhesives comply with SCAQMD Rule #1168)

### 2.3 Static Load Limit:

850 pounds per square inch when tested in accordance with ASTM F 970-00, Standard Test Method for Static Load Limit.

### 2.4 Slip Resistance:

Meets or exceeds A.D.A. recommendation of 0.6 for flat surfaces and 0.8 for inclined surfaces when tested in accordance with ASTM D 2047, Standard Test Method for Static Coefficient of Friction.

### 2.5 Castor Resistance:

Suitable for office chairs with castors when tested in accordance with EN 425, Castor Chair Test.

### 2.6 Fire Testing:

Class 1 when tested in accordance with ASTM E 648/NFPA 253, Standard Test Method for Critical Radiant Flux.

Meets 450 or less when tested in accordance with ASTM E 662/ NFPA 258, Standard Test Method for Smoke Density.

### 2.7 Chemical Resistance: (Exposure Time: One Hour)

|                               |              |
|-------------------------------|--------------|
| Acetic Acid (5%)-----         | No Change    |
| Isopropyl Alcohol (70%)-----  | No Change    |
| Sodium Hydroxide (5%)-----    | No Change    |
| Hydrochloric Acid (5%)-----   | No Change    |
| Sulfuric Acid -----           | No Change    |
| Ammonia (5%)-----             | No Change    |
| Bleach -----                  | No Change    |
| Phenol (5%)-----              | No Change    |
| Gasoline -----                | No Change    |
| Kerosene -----                | No Change    |
| Mineral Oil, Olive Oil -----  | No Change    |
| Methalyne Blue-----           | No Change    |
| Iodine, Betadine-----         | Color Change |
| Gel-Based Hand Sanitizer----- | No Change    |
| Hair Dye-----                 | No Change    |

Tested in accordance with ASTM F 925, Standard Test Method for Resistance to Chemicals of Resilient Flooring.

## 3. INSTALLATION

### 3.1 Site Conditions:

The installation should not begin until the work of all other trades has been completed, especially overhead trades. Areas to receive flooring should be clean, fully enclosed and weathertight with the permanent HVAC must be fully operational, controlled and set at a minimum of 68° F (20° C) for a minimum of seven days prior to, during, and seven days after the installation. The flooring material (including adhesive and welding rod) should be conditioned in the same manner for a minimum of 48 hours prior to the installation. Areas to receive flooring shall be adequately lighted to allow for proper inspection of the substrate, installation and seaming of the flooring, and for final inspection.

### 3.2 Substrates:

Floors shall be sound, smooth, flat, permanently dry, clean, and free of all foreign materials including, but not limited to, dust, paint, grease, oils, solvents, curing and hardening compounds, sealers, asphalt and old adhesive residue. Wood floors should be double construction with a minimum total thickness of 1 inch. Wood floors must be rigid, free from movement and have at least 18" of well-ventilated air space below. Forbo floor coverings should not be installed over wooden subfloors built on sleepers over on or below grade concrete floors without first making sure that adequate precautions have been taken to ensure the structural integrity of the system, and to prevent moisture migration from the concrete slab. Concrete substrates should be prepared in accordance with the latest version of ASTM F 710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring. Concrete shall have a minimum compressive strength of 3,000 psi. Patch and repair minor cracks and other imperfections using only the highest quality patching and leveling compounds in strict accordance to the manufacturer's recommendations for their use and application. Floor covering should not be installed over expansion joints. Suitable expansion joint covers should be used. It is essential that moisture tests be conducted on all concrete floors regardless of the age or grade level. Conduct calcium chloride tests in accordance with the latest version of ASTM F 1869, Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride. Measure the internal relative humidity of the concrete slab in accordance with the latest version of ASTM F 2170, Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes. One test of each type should be conducted for every 1,000 square feet of flooring (minimum of 3). The tests should be conducted around the perimeter of the room, at columns, and anywhere moisture may be evident. Concrete moisture vapor emissions must not exceed 8.0 lbs. per 1,000 square feet in 24 hours when using Forbo V 885 adhesive. Concrete internal relative humidity must not exceed 85% when using Forbo V 885 adhesive. A diagram of the area showing the location and results of each test should be submitted to the Architect, General Contractor or End User. If the test results exceed these limitations, the installation must not proceed until the problem has been corrected.

**Note: Moisture tests indicate conditions at the time of the test only. The absence of an acceptable vapor retarder under the slab, changes in the environment, or other circumstances beyond Forbo's control, may lead to adverse changes in the moisture condition of the concrete. Forbo's warranty shall not be extended to cover damage or failures caused by moisture conditions in excess of specified limits that occur after the time of initial testing or installation.**

### 3.3 Adhesive:

Use Forbo V 885 adhesive.

Use a 1/32" x 1/16" x 1/32" U notch trowel.

Spread Rate: Approximately 175 square feet/gallon.

### 3.4 Heat Welding:

Seams must be heat welded. Use only Forbo Eternal welding rod.

Welding rod dimensions: 4 mm; 165 linear feet per spool.

### 3.5 Flash Coving (OPTIONAL):

Flash cove up walls to the desired height. Use Forbo V 885 adhesive.

### 3.6 Installation Guidelines:

Refer to Forbo Flooring's Installation Guide for complete installation guidelines.

## 4. AVAILABILITY AND COST

Available through authorized Forbo Flooring suppliers throughout North America. Contact Forbo Flooring or an authorized supplier for cost information.

## 5. WARRANTY

Limited 5-year warranty. For complete details, contact Forbo Flooring.

## 6. CARE AND CLEANING

After installation is completed, allow a minimum of 5 days for the adhesive to properly bond and cure before conducting wet cleaning procedures. See Forbo Flooring's Floor Care Guide for additional information.

## 7. SUPPORT SERVICES

Submittal samples for verification and approval are available upon request from Forbo Flooring. Samples shall be submitted in compliance with the requirements of the Contract Documents. Please fax all sample requests to +570 450 0229 or visit our website at [www.forboflooringna.com](http://www.forboflooringna.com). Accepted and approved samples shall constitute the standard materials that represent materials installed in the project.

For current installation and floor care guidelines, guide specifications, and other technical information, visit our website at [www.forboflooringna.com](http://www.forboflooringna.com).