



## PRODUCT INFORMATION BULLETIN

**GuardianGreen™** is an integrative group that utilizes an epoxy primer, a two-component instant setting seamless spray applied membrane that provides an elastomeric waterproof coating with a theoretical dry film thickness between 105 mils± (2667 microns). Its 100% solids, solvent free and odorless, applied on vertical and horizontal surfaces forming a continuous membrane that is primarily used on concrete surfaces. Insure that the substrate and outside air temperature is between 40° F (4.4° C) and 104° F (40° C) at least 6° (-14.44° C) above the dew point and rising. Allows for light traffic (landscaping vehicles) within twenty (24) Hours at 75° Fahrenheit (23.88° C) and 50% Relative Humidity.

### ADVANTAGES

- ✦ USGBC LEED, EO Credit 4.2 AND 4.3: Low-emitting VOC Compliant Materials
- ✦ 30 year leak free warranty – preapproved in writing, with an independent third party inspection service
- ✦ Withstand constant immersion in water
- ✦ Chemical resistance – Excellent
- ✦ Applied at any thickness
- ✦ Tenacious adhesion to most construction materials
- ✦ System can be applied at zero pitch
- ✦ Withstands constant immersion in water
- ✦ No bitumen
- ✦ No clamping rings
- ✦ No detailing sheets
- ✦ No fabric reinforcement
- ✦ No hot kettles or open flames
- ✦ No noxious odors
- ✦ No protection board required
- ✦ No root barrier required
- ✦ No seams
- ✦ No surface flashings
- ✦ No termination bars
- ✦ No VOC restrictions

### USES

- ✦ Green Roofs and Planters

### PREPARATION

**NOTE:** Read and understand all the information contained in the Product Information Bulletin's and SDS's prior to starting any project. Freedom ® Chemical Corporation's products are for professional use only.

Concrete should be cured for 28 days (less than 28 days a Moisture Vapor Reducing primer maybe required) prior to product application and have at least 3000 psi compressive and 220 psi tensile strength.

Surface preparation is the essential first stage treatment of a substrate before the application of any coating. The performance of a coating is significantly influenced by its ability to adhere properly to the substrate material. It is generally established that correct surface preparation is the most important factor affecting the total success of surface treatment. Surfaces will be clean, dry, and sound, the presence of even small amounts of surface contaminants, dust, efflorescence, laitance, salts, curing compounds, dirt, oil, form release agents, and other foreign matter can physically impair and prevent coating adhesion to the substrate.

Shot Blast concrete between CSP 3 - 7.  
Profile steel between 4-6 mils.

Grinding is permitted only in areas that are inaccessible to shot blasting equipment.

### COVERAGE RATE

Freedom ® Chemical Corporation's coverage rates for all products are approximate and vary based on type of substrate, substrate porosity, and roughness and size of broadcast aggregate. See individual Product Information Bulletin.

### PACKAGING

See individual Product Information Bulletin.

### PRIMER

Select appropriate primer from individual Product Information Bulletin's. FreedomTuff® primer is required on all substrates, except on properly prepared steel (immersion requires primer).

### MIXING

See Product Information Bulletin's.

Do not mix partial containers of multi-component materials.

Do not dilute under any circumstances.

### APPLICATION

Insure that the substrate and outside air temperature is between 40° F (4.4° C) and 104° F (40° C) at least 6° (-14.44° C) above the dew point and rising.

**STEP ONE:** Apply two (2) coats Freedom ® Chemical Corporation's *FreedomTuff* ® primer over the entire surface in sufficient quantity to obtain a minimum theoretical dry film thickness of 10 mils (254 microns). Apply the first and second coat at a rate of 100 to 300 square feet per gallon (9.29030m<sup>2</sup> to 27.8709m<sup>2</sup> per liter), in sufficient quantity to obtain a theoretical 5 mils (127 microns) per coat dry film thickness. Let the first coat of *FreedomTuff* ® primer become tack free prior to application of the second coat. Aggregate the second coat of primer with 0.125 pounds of washed, rounded, dry contamination free sand nominal sieve size #30-60.

Excess aggregate must be completely removed before application of the *FreedomTuff* ® 2190.

Do not apply more primer to substrate than can be coated with *FreedomTuff* ® 2190 within 18 hours of application. If primer is not coated within the allotted time, sand and re-apply primer.

**STEP TWO:** Prior to application of *FreedomTuff* ® 2190 precondition both Part-A and Part-B to 75° F (23.88° C) - 80° F (26.66° C) before applying.

FREEDOMTUFF® GUARDIANGREEN™

Fit Part-A with a desiccant drying device.

Apply *FreedomTuff*® 2190 using a plural component, high pressure 1:1 ratio heated, spray equipment.

Proportioner Conditions:

- Capacity minimum 20 lbs. per minute
- Static pressure 2800 – 3000psi
- Spraying pressure 2500psi minimum
- Pressure balance 100 variance desirable
- 300 psi variance maximum
- Temperatures preheaters & hose 165° F (73.8889° C) each

Spray apply *FreedomTuff*® 2190 at a minimum of 6 gallons (22.7125 liters) per 100 square feet (9.290 m<sup>2</sup>) to the substrate, to achieve a theoretical dry film thickness of 96 dry mils (2438.4 microns) over the entire surface.

When *FreedomTuff*® 2190 is applied in sections, each application must overlap the previous one within 0 – 6 hours by a minimum four (4") to a neat straight line.

*FreedomTuff*® 2190 should be sprayed in a smooth pattern, to establish uniform thickness and appearance (crosshatch pattern).

**STEP THREE: (OPTIONAL)** The *FreedomTuff*® 4000 is for (aesthetics) in exposed areas and must be applied within 0 - 6 hours of spraying *FreedomTuff*® 2190. *FreedomTuff*® 4000 in one coat at a rate of 1 gallon (3.7854 liters) per 100 square feet per gallon (9.290 m<sup>2</sup>) or in sufficient quantity to obtain a minimum theoretical dry film thickness of 16 mils (304.79 microns) to achieve a desired color. Apply *FreedomTuff*® 4000 on horizontal and vertical surfaces, apply evenly over the entire surface using a ¼" mohair roller with a phenolic resin core.

*FreedomTuff*® 4000 should be applied in a smooth pattern to establish uniform thickness and appearance.

Re-coating *FreedomTuff*® 4000 the surface must be properly prepared and primed prior to re-coating.

#### DRY FILM THICKNESS

*Freedom*® Chemical Corporation's *GuardianGreen*™ coating without sand is a theoretical dry film thickness of 105 mils± mils (2667 microns).

#### SPECIFICATION AND FIELD ASSISTANCE

Contact *Freedom*® Chemical Corporation for assistance.

Jobsite visits by *Freedom*® Chemical Corporation's employees or its independent agents are solely for the purpose of determining qualification for warranty.

#### DISPOSAL

Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations.

#### PRODUCT INFORMATION

See Product Information Bulletins for substrate preparation, packaging, coverage rates, primer, mixing and application information for each product selected.

#### TESTING

Test the entire surface of the protective liner by spark testing at 100 volts per dry mil of lining thickness as per NACE Standard RPO 18B or ASTM D-1562 (steel) or ASTM D-4787 (concrete). Or other method approved by *Freedom*® Chemical Corporation.

Substrate adhesion test should be performed seven days after application.

#### WARNING

The products listed in this Product Information Bulletin contain Isocyanates and Epoxy Resins.

*Incredible Stuff, Exceptional Service, and Friendly People™*

Read all the information in this product information bulletin, and material safety data sheet (MSDS) before applying any material. The information contained herein is for purposes of identifying the product and does not constitute a warranty that the product will conform to this description. Product specifications and performance will vary depending on application methodologies, raw materials and other factors. Guidelines, recommendations, statements, and information contained herein is based on tests we believe to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. It is the user's responsibility to satisfy themselves, by their own information and tests, to determine suitability of the product for their own intended use, application and job situation and the user assumes all risk and liability resulting from their own use of the product. We do not suggest or guarantee that any hazards listed herein are the only ones that may exist. Neither seller nor manufacturer shall be liable to the buyer or any third party for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements, whether verbal or in writing, other than those contained herein shall not be binding upon the manufacturer, unless in writing and signed by a corporate officer of *Freedom*® Chemical Corporation. Typical properties and application information is provided for the purpose of establishing a general profile of the material and proper application procedures. Performance results were obtained in a controlled environment and *Freedom*® Chemical Corporation makes no claim that these tests or any other tests accurately represent all environments. Products manufactured by *Freedom*® Chemical Corporation are free of defects for a period of one (1) year, liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the materials in question. † *Freedom*® Chemical and *FreedomTuff*® are trademarks registered in the US Patent and Trademark Office. ‡ The marks of *Freedom*® Chemical Corporation, its divisions, slogans, emblems, other marks appearing in this document are the trademarks and/or service marks of *Freedom*® Chemical Corporation, its subsidiaries, affiliates or licensors Copyright © March 2015 *Freedom*® Chemical Corporation. All Rights Reserved. All published information is subject to change without notice.