



FreedomTuff® GuardianPPWF™ is integrative group of coatings utilizing an epoxy primer, instant setting, two-component spray applied polyurea and a hand applied two component polyurethane that provides an elastomeric waterproof system with a theoretical dry film thickness of 105± mils (2667 microns). The coatings have no noxious odors, and are applied on vertical and horizontal surfaces forming a continuous (seamless) membrane, used on primarily on concrete surfaces.

ADVANTAGES

- ✦ USGBC LEED, EQ Credit 4.2 AND 4.3: Low-emitting VOC Compliant Materials
- ✦ 10 year leak free warranty – must be preapproved in writing, and requires an independent third party inspection service.
- ✦ Withstands constant water immersion.
- ✦ Chemical resistance – excellent.
- ✦ Complies with VOC and SCAQMD requirements.
- ✦ No noxious odors.

RECOMMENDED USES

- ✦ Water Features

NOTE: Read all the information contained in each of the Product Information Bulletin's prior to starting any coating project.

Read MSDS for health and safety information.

Products are for professional use only.

SURFACE PREPARATION

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. Read all the information contained in each of the Product Information Bulletin's prior to starting any coating project.

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

Concrete should be cured for a minimum of 28 days prior to product application and have at least 3000 psi compressive and 220 psi tensile strength.

MIXING/APPLICATION PROCEDURES

Mix entire/full package containers, do not measure or mix partial containers of multi-component materials.

Do not dilute under any circumstances.

Primer is required on all substrates, except wood and on properly prepared steel (immersion requires a primer).

Insure that the substrate and outside air temperature is between 32° F (0° C) and 104° F (40° C) at least 6° (-14.44° C) above the dew point and rising.

STEP ONE: Concrete substrates should be shot blasted to obtain to a Concrete Surface Profile (CSP) 5-9.

Read all the information contained in each of the Product Information Bulletin's prior to starting any coating project.

Coverage rates for all products are approximate and vary based on type of substrate, porosity, roughness and size of broadcast aggregate. See Product Information Bulletin's.

STEP TWO: Select appropriate *FreedomTuff®* primer, see Product Information Bulletin's.

Apply two (2) coats Freedom Chemical® Corporation's *FreedomTuff®* primer over the entire surface, apply the first coat at a rate of 100 to 300 square feet per gallon (9.29030m² to 27.8709m² per liter), in sufficient quantity to obtain a theoretical 5 mils (127 microns) per coat dry film thickness, let *FreedomTuff®* primer become tack free prior to application of the second coat of primer at a rate of 100 to 300 square feet per gallon (9.29030m² to 27.8709m² per liter), in sufficient quantity to obtain a theoretical 5 mils (127 microns) and fully aggregate a washed, rounded, dry and contamination free sand nominal sieve size #30-50 or Cemex #0/30 into the second coat of wet primer until the primer is fully filled. Excess aggregate must be completely removed before application of the *FreedomTuff® 2190/SealFlex™*, and if shiny spots appear these areas must be primed and sanded again.

Allow primer to become tack free prior to application of *FreedomTuff® 2243-CR or FreedomTuff® 2190™*.

Do not apply more primer to substrate than can be coated with *FreedomTuff® 2243-CR or FreedomTuff® 2190™* within eighteen (18) hours of application. If primer is not coated within the allotted time, sand and re-apply primer.

STEP THREE: Prior to application of *FreedomTuff® 1585 Aliphatic, FreedomTuff® 2243-CR or FreedomTuff® 2190™* precondition both Part-A and Part-B to 75° F (23.88° C) - 80° F (26.66° C) before applying.

Adequately blend *FreedomTuff® 2243-CR or FreedomTuff® 2190™* Part-B (Resin) making sure not to encapsulate any air until the mixture and color is consistent.

Fit Part-A with a desiccant drying device.

Apply *FreedomTuff® 2243-CR or 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

FREEDOMTUFF® GUARDIANPPWF™

- 300 psi variance maximum
- Temperatures preheaters & hose 170° F (76.66° C) each

Spray apply *FreedomTuff*® 2243-CR or *FreedomTuff*® 2190™ at 5 to 6 gallons (18.9271 or 22.7125 liters) per 100 square feet (9.290 m²) to the substrate, to achieve a theoretical dry film thickness of 80 to 96 dry mils (2032 or 2438.4 microns) over the entire surface.

NOTE OPTIONAL: Aliphatic Spray Polyurea apply *FreedomTuff*® 1585 at 5 gallons (18.9271 liters) per 100 square feet (9.290 m²) to the substrate, to achieve a theoretical dry film thickness of 80 dry mils (2032 microns) over the entire surface

FreedomTuff® 2243-CR or *FreedomTuff*® 2190™ should be sprayed in a smooth pattern, to establish uniform thickness and appearance (crosshatch pattern).

Re-coat *FreedomTuff*® 2243-CR or *FreedomTuff*® 2190™ within 0 – 6 hours of previous coat.

FreedomTuff® 2243-CR or *FreedomTuff*® 2190™ is not UV stable - aromatic polyureas are known to darken in color when exposed to UV and/or sunlight. This discoloration has shown to have little to no effect on the integrity of aromatic polyureas.

(OPTIONAL ALIPHATIC TOP COAT) STEP FOUR: on exposed surfaces of *FreedomTuff*® 2190™ maybe top coated with *FreedomTuff*® 4200 to achieve a desired color with *FreedomTuff*® 4200. Proceed with application of *FreedomTuff*® 4200 while air and substrate temperatures are between 40° F (4.4° C) and 104° F (40° C) and 25% Relative Humidity (see Product Information Bulletin).

Coverage rates are approximate and vary based on type of substrate, porosity, roughness and size of broadcast aggregate. *FreedomTuff*® 4200 may require more than two coats.

Proceed with application of *FreedomTuff*® 4200 while air and substrate temperatures are between 40° F (4.4° C) and 104° F (40° C) and 25% Relative Humidity.

When *FreedomTuff*® 4200 is used as a top coat it must be applied within twenty four (24) hours of the application of any Freedom Chemical® Corporation's products.

DRY FILM THICKNESS

Freedom® Chemical Corporation's *GuardianPPWF*™ coating with primer is a theoretical dry film thickness of 90 to 105 mils± (2667 to 2286 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.

STORAGE/LIMITATIONS/PRODUCT INFORMATION

See Product Information Bulletins for substrate preparation, packaging, coverage rates, primer, mixing and application instructions for all products selected.

TESTING

Test the surface of *FreedomTuff*® 2243-CR or *FreedomTuff*® 2190/ *SealFlex*™ 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). Mark and repair.

Substrate adhesion test should be performed seven days after application.

WARNING

The *FreedomTuff*® *GuardianPPWF*™ coating contain Isocyanates.

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.