



FREEDOMTUFF® PRODUCT INFORMATION BULLETIN

FREEDOMTUFF® GUARDIAN-DOS™ is a group of integrative coatings utilizing an epoxy primer, spray applied freedomtuff® 2190 polyurea, freedomtuff® 4300 polyurethane intermediate coat and freedomtuff® 4000 polyaspartic topcoat that are hand applied a protective and elastomeric waterproofing with an overall theoretical dry film thickness between 80 mils± (2032 microns) to 140 mils± (3556 ± microns) used on concrete, frp panels, wood, metal and tile surfaces for showers and flooring. These coatings are 100% solids, solvent free and odorless, applied on vertical and horizontal surfaces forming a continuous seamless membrane.

ADVANTAGES

- ✦ Can withstand constant water immersion
- ✦ Meets USDA criteria
- ✦ No noxious odors
- ✦ Open to traffic in 4 hours at 75° Fahrenheit (23.88° C) and 50% R.H.
- ✦ USGBC LEED, EQ Credit 4.2 AND 4.3: Low-emitting VOC Compliant Materials

USE

- ✦ Amusement Parks/Entertainment
- ✦ Beverage/Food Processing Plant/Cold Storage Facilities
- ✦ Flooring
- ✦ Shower Walls and Floors

PROFESSIONAL USE ONLY

Read and understand all the information contained in the Product Information Bulletin's, Specifications, SDS's and product labels prior to starting any project. Nothing contained in any of Freedom® Chemical Corporation's materials relieves the end user of the obligation to read and follow the warnings and instructions for each of Freedom® Chemical Corporation's products.

PREPARATION

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.

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 4 - 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, roughness and size of broadcast aggregate.

PACKAGING

See Product Information Bulletin's.

PRIMER

Select appropriate primer from individual Product Information Bulletin. FreedomTuff® primer is required on all substrates, except on properly prepared steel.

MIXING

See Product Information Bulletin's.

Do not mix partial containers of multi-component materials.

Do not dilute under any circumstances.

APPLICATION

Throughout the application the sanded surface must be clean and dry.

For optimum results proceed with application while air and substrate temperatures are between 32° F (0° C) and 104° F (40° C) 6° (-14.44° C) above the dew point and rising.

The substrate may require more than one coat of FreedomTuff® primer. After selection of primer, mix and immediately pour primer onto the substrate at a rate of 100 to 200 square feet per gallon (9.29030m² to 18.5806m² per liter) in enough quantity to obtain a minimum theoretical dry film thickness of 8 mils (203.2 microns) per coat.

Apply coating over primer within eighteen (18) hours, if not coated within the time allotted, contact Freedom® Chemical Corporation.

Allow Step One (1) primer to become tack free prior to application of FreedomTuff® FT-2190.

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.

Adequately blend 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® 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 170° F (76.66° C) each

Spray apply FreedomTuff® 2190 at a minimum of 4 (15.14165 liters) to 6.25 gallons (23.65882 liters) per 100 square feet (9.290 m²) to the substrate, to achieve a theoretical dry film thickness between 64 mils (1625.6 microns) to 100 dry mils (2540 microns) over the entire surface.

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

Re-coat FreedomTuff® 2190 within 0 – 6 hours of previous coat.

STEP THREE: Application of FreedomTuff® 4300 must start within 0 - 6 hours of spraying FreedomTuff® 2190. FreedomTuff® 4300 Part-B should be mixed individually prior to combining, add Part-A to Part-B while mixing, using a mechanical mixer at medium speed making sure not to encapsulate any air. Mix until a homogeneous mixture and color is obtained (a minimum of 2 minutes is recommended).

Immediately pour the FreedomTuff® 4300 at 1¼ gallons (4.731 liters) per 100 square feet onto surface and spread evenly onto the FreedomTuff® 2190 in enough quantity to obtain 20 dry mils (508 microns), over the entire surface using notched trowel or squeegee then back roll using a ¼ "mohair roller with a phenolic resin core.

Prior to its full set and starting to gel, broadcast to refusal a washed, dry, rounded, contamination free 40 x 70 nominal sieve size sand (0165"/0.0083" millimeters) (400/210 microns) with 6.5 Moh's minimum hardness into the FreedomTuff® 4300, or as required to achieve the specified slip-resistant finish.

Excess (loose) aggregate must be completely removed before application of the FreedomTuff® 4000. If shiny spots (no sand) appear in this area, re-apply FreedomTuff® 4300 and reapply sand.

Tile application: If applying tile over the FreedomTuff® Guardian-DOS™ coating skip Step Four (4).

Excess aggregate must be completely removed.

Do not apply more FreedomTuff® 4300 than can be top coated within twenty-four (24) hours.

Allow FreedomTuff® 4300 to dry prior to application of FreedomTuff® 4000.

STEP FOUR: FreedomTuff® 4000 is applied in two coats the first coat at a rate of 200 square feet per gallon (18.5806 m²), and the second coat at a rate of 200 square feet per gallon (18.5806 m²), for a total theoretical dry film thickness of 16 mils (406.4 microns) to achieve a desired color.

Coverage rates are approximate and vary based on type of substrate, porosity, roughness and size of broadcast aggregate. FreedomTuff® 4000 may require more than two coats.

Proceed with application of FreedomTuff® 4000 while air and substrate temperatures are between 40° F (4.4° C) and 104° F (40° C) and 25% Relative Humidity.

When FreedomTuff® 4000 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.

Re-coating FreedomTuff® 4000 the surface must be properly prepared and may require priming prior to re-coating.

DRY FILM THICKNESS

Freedom® Chemical Corporation's Apply FreedomTuff® Guardian-DOS™ coating with an aliphatic top coat is a theoretical dry film thickness between 80 mils± (2032 microns) to 140 mils± (3556 ± microns) without sand.

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 determining qualification for warranty.

DISPOSAL

All spilled material, unused contents of containers, empty containers and secondary containment spills/leaks, must be cleaned up and 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.

FreedomTuff® products have a shelf life of 1 year from the date of manufacture, in factory-sealed containers.

TESTING

Substrate adhesion test should be performed seven days after application. All testing should be performed by a qualified testing agency. Freedom® Chemical Corporation is not responsible for testing.

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 or guaranty that the product will conform to this description. Product specifications and performance will vary depending on application methodologies, raw materials and other factors. All published information and specifications are subject to change without notification. Technical data shown in product data sheets are typical but reflect laboratory test procedures conducted in laboratory conditions. Actual field performance and test results will depend on installation methods and site conditions. Field test results will vary due to critical job site factors. All recommendations, statements and technical data contained in this data sheet are 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 or guaranty of any kind. Satisfactory results depend upon many factors beyond the control of Freedom® Chemical Corporation. User shall rely on their own information and tests to determine suitability of the product for the intended use and user assumes all risk, loss, damage, expense and liability resulting from their direct use, indirect use or consequential to their use of the product. Freedom® Chemical Corporation shall not be liable to the buyer or any third party for any injury, loss or damage directly or indirectly resulting from use or inability to use the product. 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© January 2019 Freedom® Chemical Corporation. All Rights Reserved.