



FREEDOMTUFF® PRODUCT INFORMATION BULLETIN

FREEDOMTUFF® 4300 is a 100% solids two-component hand applied aromatic polyurethane used as a protective or waterproof coating with good chemical and abrasion resistance, its designed for use as a base or intermediate coat. FreedomTuff® 4300 is used vertically and horizontally on concrete, steel, metal, and polyurea surfaces. Used with the FreedomTuff® GuardianGreen™, GuardianDeck™, Guardian-Dos™, Guardian-ST™, Guardian-WF™ and the Guardian-PD™. Its quick gel and set time make it convenient for multiple passes.

ADVANTAGES

- ✦ Excellent abrasion resistance and chemical resistance
- ✦ Excellent for low temperature applications
- ✦ Meets USDA criteria
- ✦ No noxious odors
- ✦ O – VOC's, 100% solids
- ✦ Open to pedestrian traffic in 4 hours, vehicular the next day at 75° Fahrenheit (23.88° C) and 50% humidity
- ✦ Thermal Stability – Excellent
- ✦ USGBC LEED, EQ Credit 4.2 AND 4.3: Low-emitting VOC Compliant Materials

USES

- ✦ Bridge Decks
- ✦ Commercial, Retail, Institutional
- ✦ Parking Structures, Rooftop Garages

PROFESSIONAL USE ONLY

Read and understand all the information contained in the Product Information Bulletin's, 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.

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 - 5.

Profile steel between 4-6 mils.

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

COLOR – Amber.

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.

PACKAGING

3 Gallon Kit: 1 gallon (3.570-liters Part-A) and 2 gallons (7.570-liters Part-B).

PRIMER

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

MIXING

Do not mix partial containers of multi-component materials.

Do not dilute under any circumstances.

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 one (1) minute is recommended.

FreedomTuff® 4300 should be used within 20 - 30 minutes of mixing.

APPLICATION

Throughout the application the sand 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.

Allow primer to become tack free prior to application of FreedomTuff® 4300.

Do not apply more primer to substrate than can be coated with FreedomTuff® 4300 the same day or within eighteen (18) hours of application. If primer is not coated with FreedomTuff® 4300 within the allotted time, re-apply primer.

Apply 1¼ gallons (4.731765 liters) per 100 square feet of FreedomTuff® 4300 at 100 square feet per gallon (9.290 m²) in enough quantity to obtain a minimum theoretical 20 mils dry (508 microns) film thickness (or more to meet architectural specification). Immediately pour the FreedomTuff® 4300 onto the horizontal surface and spread evenly over the entire surface using notched trowel or squeegee then back roll using a ¼ " mohair roller with a phenolic resin core.

FreedomTuff® 4300 on vertical surfaces may require multiple coats to achieve desired thickness.

When FreedomTuff® 4300 it should be applied in a smooth pattern to establish uniform thickness and appearance.

When FreedomTuff® 4300 is applied in sections, each application must overlap the previous one a minimum four (4") to a neat straight line.

If application is over a polyurea, it must be applied within 0 - 6 hours of application of the FreedomTuff® polyurea.

FreedomTuff® 4300 aromatic base coat is UV stable – but are known to darken or change color when exposed to UV and/or sunlight.

Apply an approved Freedom® Chemical Corporation topcoat to achieve a desired color.

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.

LIMITATIONS

The end user should check the suitability of this product and the substrate prior to its application. Freedom® Chemical Corporation assumes no liability for substrate defects.

Substrates that have previously been coated are subject to absorption, which may affect the adhesion of a new coating. Adhesion to substrate should be checked prior to starting any coating project.

Excess moisture vapor in concrete slabs may result in polyurethanes and/or coating to delaminate, discolor or cause improper curing.

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

High/Low temperatures and humidity can significantly affect pot life and extend the cure time.

PRODUCT QUALITY AND STORAGE

Shipping and storage temperatures for Part-A and Part-B is between 65° F - 90° F (18° C - 32.22° C) at or below 50% Relative Humidity, avoiding freezing temperatures. If shipping or storage temperatures should fall below 65°F (18°C), some crystallization could result. Unless proper action is taken to re-form the original solution, subsequent dimerization will proceed quickly and will deteriorate the assay of the product.

Never store directly on concrete surface, always store on pallets.

Do not open until ready to use and keep containers sealed tightly.

TESTING

Perform an adhesion test prior to starting any coating project.

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.

FREEDOMTUFF® 4300 TYPICAL PROPERTIES

MIX RATIO BY VOLUME	N/A	1A:1B
HARDNESS: SHORE D	ASTM D-2240	56
TEAR RESISTANCE, DIE C	ASTM D-412	240 PIL
TENSILE STRENGTH	ASTM D-412	1630 PSI
ELONGATION	ASTM D-412	127%
TOUGHNESS	ASTM D-412	1420 PSI
BOND STRENGTH (SUBSTRATE PRIMED WITH FT-6160)	ASTM D4541	CONCRETE FAILED >435 PSI
VOLATILE ORGANIC COMPOUNDS	ASTM D-2369	0 LB/GALLON, 0 GRAMS/LITER, 100% SOLIDS
POT LIFE @ 68° F (20° C)	N/A	15 MINUTES
RETURN TO FULL SERVICE @ 68° F (20° C)	N/A	2 HOURS
VISCOSITY @77° F (25° C)	N/A	PART A RESIN 660 CPS PART B ISO 1660 CPS
FLEXIBILITY (-40° F; 180° BEND)	PASS	
TABOR ABRASION MG (1000G:1000 CYCLES CS-17)	ASTM D-4060-10	49.5

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. Product information bulletins, recommendations, statements, and information contained herein 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, 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.