



## FREEDOMTUFF® PRODUCT INFORMATION BULLETIN

**FREEDOMTUFF® 4054** is a two-component 100% aliphatic polyaspartic polyurea clear topcoat with excellent UV and gloss retention, designed for commercial, industrial and manufacturing atmospheres. FreedomTuff® 4054 is spray or roller applied for use on concrete, wood and metal surfaces, is insensitive to moisture and can be applied in one or more passes.

### ADVANTAGES

- ✦ Abrasion resistant for high wear environments
- ✦ Excellent gloss retention
- ✦ Meets USDA criteria
- ✦ No noxious odors
- ✦ USGBC LEED, EQ Credit 4.2: Low-emitting VOC Compliant Materials
- ✦ UV stable
- ✦ Seamless non-porous membrane to eliminate microbial growth

### USES

- ✦ Cold Storage/Food Processing Facilities
- ✦ Commercial
- ✦ Industrial
- ✦ Correctional Facilities
- ✦ Manufacturing Facilities
- ✦ Parking Structures
- ✦ Topcoat

### 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 - 7.

Profile steel between 4-6 mils.

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

COLOR  
Clear

FreedomTuff® 4054 is UV stable.

### 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.

1-gallon (3.785 liters) per 100 square feet (9.29030m<sup>2</sup>) yields a theoretical 16 mils dry (406.4 microns) film thickness.

### PACKAGING

3-gallon Kit – 1-gallon Part-A (3.785 liters) and 2-gallon (Part-B 7.57082 liters).

### PRIMER

Select appropriate primer from individual Product Information Bulletin's. FreedomTuff® primer is required on all substrates, except on properly prepared steel unless adhesion test are performed and approved by Freedom Chemical Corporation.

### MIXING

Do not mix partial containers of multi-component materials.

Do not dilute under any circumstances.

Adequately mix FreedomTuff® 4054 Part-A and Part-B separately with a drill motor and proper mixing blade before combining. One part-A and Part-B are combined mix again until the mixture and color are consistent.

FreedomTuff® 4054 should be used within 20 - 30 minutes of mixing.

### APPLICATION

Throughout the application the prepared 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.

Apply FreedomTuff® 4054 onto the horizontal surface and spread evenly over the entire surface using 1/8" notched squeegee, then back roll using a 1/4 "mohair roller with a phenolic resin core. On vertical surfaces use a 1/4 "mohair roller with a phenolic resin core

When FreedomTuff® topcoats are applied in sections, each application must overlap the previous one within (24) twenty four hours by a minimum two (2") to a neat straight line.

Recoat window is within (24) twenty four hours of application.

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

#### CURING

At 70° F (21° C) and 50% humidity, allow each coat to dry 4 - 8 hours.  
Allow 48 hours before permitting heavy traffic.  
Heavier applications will require a longer curing time.

#### 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 and leaks must be cleaned up 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 cause a coating to delaminate, discolor or cause improper curing.

High/Low temperatures and humidity can 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

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

### FREEDOMTUFF® 4054 TYPICAL PROPERTIES

MIX RATIO BY VOLUME	N/A	1A:2B
HARDNESS: SHORE D	ASTM D-2240	70
SOLIDS	ASTM D-2697	98%
60° GLOSS	ASTM D-523	90
ABRASION RESISTANCE	ASTM D-4060 (CS-17, 1000 CYCLES)	81.9
VISCOSITY AT 75°F (24°C)	BROOKFIELD	PART A 1200 CPS PART B 500 CPS
VOLATILE ORGANIC COMPOUNDS	ASTM D-2369-81	<50 GRAMS/LITER
TACK FREE TIME	(THICKNESS AND SUBSTRATE TEMP. SENSITIVE)	2 - 3 HOURS
POT LIFE @ 75° F (24° C) @ 50% R.H	(THICKNESS AND SUBSTRATE TEMP. SENSITIVE)	20 MINUTES
RETURN TO SERVICE	FOOT TRAFFIC	4 - 8 HOURS
RETURN TO SERVICE	FULL SERVICE	24 - 48 HOURS

### CHEMICAL RESISTANCE (SPOT TEST AT 70°)

	1 Hour	4 Hours	24 Hours
Water	No Effect	No Effect	No Effect
Iso-propyl alcohol	No Effect	No Effect	No Effect
Gasoline	No Effect	No Effect	No Effect
Motor Oil	No Effect	No Effect	No Effect
Transmission fluid	No Effect	No Effect	No Effect
Anti-freeze	No Effect	No Effect	No Effect
Skydrol	No Effect	Softened Lt. Stain	Softened Stain
Ammonia hydroxide (14%)	No Effect	No Effect	No Effect
Sulfuric acid (50%)	No Effect	No Effect	No Effect
Bleach (50%)	No Effect	No Effect	No Effect
Betadine	No Effect	Lt. Stain	Stain
Break Fluid	No Effect	Softened Lt. Stain	Softened Stain

*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.