



Chemical® Corporation

FT-4000® Polyaspartic Top Coat

Technical Data Sheet

PRODUCT DESCRIPTION

Freedom Chemical Corporation's FreedomTuff® 4000 is an aliphatic polyaspartic with excellent UV and color retention and good chemical resistance designed for commercial, industrial and manufacturing atmospheres. FreedomTuff® 4000 is 100% solids two-component spray or roller applied for use on concrete, wood and metal surfaces. Its quick set time is convenient and allows for application to proceed while air and substrate temperatures are between 32° F (0° C) and 104° F (40° C). It can be sprayed in one or more passes and is insensitive to moisture.

ADVANTAGES

- ✦ 100% Solids – Meets SCAQMD Requirements
- ✦ Abrasion Resistant
- ✦ Color Stable
- ✦ Excellent Color and Gloss Retention
- ✦ Odorless

RECOMMENDED USES

- ✦ Cold Storage Facilities
- ✦ Commercial, Industrial and Manufacturing Facilities
- ✦ Concrete
- ✦ Food Processing Facilities
- ✦ High Traffic Areas
- ✦ Marine Environments
- ✦ Refineries
- ✦ Steel

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 well established that correct surface preparation is the most important factor affecting the total success of surface treatment. The presence of even small amounts of surface contaminants, oil, grease, oxides etc. can physically impair and prevent coating adhesion to the substrate.

Be sure that surfaces are clean, dry, and sound and given sufficient profile to obtain adequate product adhesion.

Remove all dust, efflorescence, laitance, salts, curing compounds, dirt, oil, form release agents, and other foreign matter.

Perform an adhesion test prior to starting any coating project.

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.

ASTM D 4258-Standard practice for cleaning concrete.
ASTM D 4259-Standard practice for abrading concrete.
ASTM D 4260-Standard practice for etching concrete.
ASTM D 4262 and ASTM F 710-Standard practice for preparing concrete floors to receive resilient flooring, section 5.3 ph.

ASTM F 1869-10 Standard test method for measuring moisture vapor emission rate of concrete.

ASTM F 2170-09 Standard test method for determining relative humidity in concrete floor slabs using situ probes.

ICRI 03732: CSP 3-5-Concrete surface preparation.

SSPC-SP 5/NACE No.1, White Metal Blast Cleaning.

SSPC-SP 6/NACE No. 3, Commercial Blast Cleaning.

SSPC-SP 7/NACE No. 4, Brush-Off Blast Cleaning.

SSPC-SP 8, Pickling.

SSPC-SP 10/NACE No.2, Near-White Blast Cleaning.

SSPC-SP 11, Power Tool Cleaning to Bare Metal.

SSPC-SP 12/NACE No. 5, Surface Preparation and Cleaning of Metals by Water Jetting prior to Recoating.

SSPC-SP 13/NACE No. 6, Surface Preparation of Concrete.

SSPC-SP 14/NACE No. 8, Industrial Blast Cleaning.

COLOR

Clear, Grey and Tan - Non Standard colors are available with a minimum order of 100 gallons (379 liters).

COVERAGE RATE

1 gallon (3.785 liters) per 100 square feet (9.29030m²) and can be applied in one or more passes.

Note: Heavier applications will require a longer curing time.

PACKAGING

2 gallon Kit (1 gallon/3.785 liters part-A and 1 gallon/3.785 liters part-B).

10 Gallon Kit (5 gallons/18.927 liters part-A and 5 gallons/18.927 liters part-B) non-stock item.

MIXING PROCEDURES

Do not dilute FT-4000 under any circumstances.

Adequately mix FT-4000 part-A and part-B separately before combining.

Combine part-A and part-B and mix again with air driven power tools until the mixture and color is consistent.

FT-4000 should be used within 20 - 30 minutes of mixing.

Mix entire/full package containers of multi-component materials. Do not measure nor mix partial containers of multi-component materials.

APPLICATION

FT-4000 can be applied by a phenolic core roller.

Substrate temperature should be greater than 32° F (0° C). Insure that the outside temperature is between 32° F (0° C) and 104° F (40° C) at least 6° (-14.44° C) above the dew point and rising.

Optional: Substrate adhesion test should be performed seven days after application of FT-4000.

CURING

At 70° F (21° C) and 50% humidity, allow each coat to dry 2 - 4 hours.

Allow 48 hours before permitting heavy traffic.

EQUIPMENT CLEAN UP

Immediately clean equipment with an environmentally safe solvent, as permitted by local regulations. Cured or dried material may need to be removed by mechanical means.

SPECIFICATION AND FIELD ASSISTANCE

Contact Freedom Chemical Corporation for specification assistance.

Jobsite visits by Freedom Chemical Corporations employees or its independent agents are for the purpose of determining qualification for warranty.

STORAGE

FT-4000 has a shelf life of 1 year shelf life from the date of manufacture, in factory-sealed containers.

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

Avoid freezing temperatures.

Rotate stock regularly.

LIMITATIONS

The end user should check the suitability of this product prior to its application.

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

Recoat FT-4000 within 0 – 6 hours of previous coat.

Do not open until ready to use.

Freedom Chemical 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.

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

Low temperatures and humidity can extend the cure time.

WARNING

FT-4000 contains Isocyanates.

TECHNICAL DATA

MIX RATIO BY VOLUME.....	1A: 1B
POT LIFE @ 75° F (24° C) @ 50% R.H.....	20 MINUTES
TACK FREE TIME.....	135 MINUTES
RECOAT TIME.....	0 – 6 HOURS
SHORE HARDNESS, ASTM D-2240.....	65 D
TENSILE, ASTM D-412.....	3032PSI
ELONGATION, ASTM D-412.....	94%
TEAR, ASTM D-412.....	530% PLI
TOUGHNESS, ASTM D-412.....	2206 PSI
VOLATILE ORGANIC COMPOUNDS (ASTM D-2369-81).....	0 G/L
RECOMMENDED APPLIED THICKNESS.....	>2MM
RETURN TO SERVICE: FOOT TRAFFIC.....	2 - 4 HOURS
RETURN TO SERVICE: FULL SERVICE.....	24 - 48 HOURS
SPECIFIC GRAVITY,	
SIDE A.....	1.112
SIDE B.....	1.082
TOTAL SOLIDS BY WEIGHT, ASTM D-2369.....	100%
TOTAL SOLIDS BY VOLUME, ASTM D-2397.....	100%
VISCOSITY AT 75° F (24° C),	
SIDE – A.....	2600 CPS
SIDE – B.....	2000 CPS

NOTE: PHYSICAL PROPERTIES MAY VARY ON THE TYPE OF APPLICATION EQUIPMENT USED.
THE END USER SHOULD CHECK THE SUITABILITY OF THIS PRODUCT PRIOR TO ITS USE.

Incredible Stuff, Friendly People and Exceptional Service™

LIMITED WARRANTY: Read all information in the product data sheets, and material safety data sheets (MSDS) before applying material. Product information and instructions are subject to change without notice. Contact your Freedom Chemical Corporation agent or visit our website for current product information and instructions. Products manufactured by Freedom Chemical Corporation are free of defects and will meet Freedom Chemical Corporations current published physical properties. There are no other warranties given by Freedom Chemical Corporation of any kind implied, or expressed, including any warranty of fitness for a particular purpose, and/or merchantability in connection with this product.

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12026 CENTRALIA ROAD, SUITE C, HAWAIIAN GARDENS, CA 90716 • (562) 343-9697 • FAX (562) 343-9327
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