



Chemical Corporation

FreedomTuff® 4700 Fluoropolymer Top Coat Technical Data Sheet

PRODUCT DESCRIPTION

Freedom Chemical Corporation's FT-4700 is a Fluoropolymer with chemical, corrosion, and abrasion resistance, superior UV, and color retention, designed for commercial, industrial and manufacturing atmospheres. FT-4700 is a single component for use on concrete, urethanes, polyureas, metal, stainless steel, galvanized, aluminum, chrome, brass, copper, glass, plastic, wood, brick, marble and slate. Its quick set time is convenient for applications in temperatures -100° to 500° Fahrenheit, (-73.33° to 260° Celsius).

ADVANTAGES

- ✦ Abrasion Resistant
- ✦ Chemical Resistant
- ✦ Superior Color and Gloss Retention
- ✦ Electrical Resistant
- ✦ Meets SCAQMD Requirements
- ✦ Non Stick
- ✦ Odorless
- ✦ Reduced Friction
- ✦ UV Stable

RECOMMENDED USES

- ✦ Cold Storage Facilities
- ✦ Commercial, Industrial and Manufacturing Facilities
- ✦ Food Processing Facilities
- ✦ High Traffic Areas
- ✦ Marine Environments
- ✦ Polyureas, Polyurethanes, Fiberglass, Gel Coat and Plastic
- ✦ Refineries
- ✦ Stainless/Galvanized Steel, Aluminum, Chrome, Brass, Copper
- ✦ Steel, Concrete, Glass, Wood, Brick, Marble, Slate,

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 reduce coating adhesion to the substrate.

Be sure that surfaces are clean, dry, and sound and give 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 strength.

SURFACE PREPARATION REFERENCES

- ASTM D4258-Standard practice for cleaning concrete
- ASTM D4259-Standard practice for abrading concrete
- ASTM D4260-Standard practice for etching concrete
- ASTM F1869-Standard test method for measuring moisture vapor emission rate of concrete

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

COVERAGE RATE

1 gallon (3.79 liters) per 500 to 800 square feet (37.16m²).

PACKAGING

1 gallon (3.79 liters) Part-A (Coating) and 4oz (Crosslinker) (0.11829 liters).

5 gallon (18.92705 liters) Part-A (Coating) and 32oz (Crosslinker) (0.9463 liters)

MIXING PROCEDURES

Do not Dilute FT-4700 under any circumstances.

Mix FT-4700 vigorously for two (2) minutes or until the mixture and color is consistent.

Keep FT-4700 covered to extend working life.

APPLICATION

FT-4700 can be applied by a phenolic core roller, spray, brush or dip.

Application thickness 4 mils (0.2032 millimeters) wet.

CURING

At 75°F (24°C) and 50% humidity, allow each coat to dry a minimum of 30 minutes.

Note: Weather can affect curing time.

Allow 72 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 making recommendations only and can not provide analysis of architectural specifications, management or quality control on the project.

STORAGE

FT-4700 has a shelf life of 1 year shelf life from the date of manufacture, in factory-sealed containers.

Storage temperature is between 59°F - 77°F (15°C - 25°C), 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-4700 within 0 – 24 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.

Surface temperature should be greater than 50°F (10°C) and at least 5°F (-15°C) above the dew point.

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

Low temperatures and humidity can extend the cure time.

WARNING

FT-4700 contains Isocyanates and Curative Material's.

TECHNICAL DATA

DRYING TIME (2 MIL WET FILM ON GLASS @ 75°F (24°C) @ 50% R.H).....	4 HOURS
CURE TIME.....	24 HOURS
RECOAT TIME.....	0 - 24 HOURS
POT LIFE @75°F (24°C).....	2 HOURS
HARDNESS, ASTM D-2240.....	9 PENCIL
TENSILE, ASTM D-412.....	4000PSI
ELONGATION, ASTM D-1457.....	50%
COEFFICIENT OF FRICTION ASTM-D1894.....	0.15-0.35 STATIC
TABER ABRASION RESISTANCE, ASTM D-3389, 1000 CYCLES.....	>15 MG LOSS
WATER ABSORPTION, ASTM D-570.....	>0.03%
IMPACT RESISTANCE, ASTM D-256.....	13 FT/LB INCH
DIELECTRIC STRENGTH ASTM D-149.....	1400 VOLTS PER MIL
ADHESION ASTM D-3359-95.....	3B
SALT SPRAY RESISTANCE ASTM B-117.....	4000 HOURS
FLAME SPREAD ASTM E-84.....	0 FLAME SPREAD
VOLATILE ORGANIC COMPOUNDS (ASTM D-2369-81).....	0 G/L
APPLIED THICKNESS: 4 TO 8 MILS (0.0008 TO 0.002 MILLIMETERS)	
RETURN TO FULL SERVICE:	7-10 DAYS
TOTAL SOLIDS BY VOLUME, ASTM D-2397.....	100%

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 APPLICATION.

CHEMICAL RESISTANCE ASTM D-1308 24 Hours

CAUSTIC SODA 100% NAOH – NO EFFECT
METHYL ETHYL KETONE (MEK) – NO EFFECT
MURIATIC ACID 31% - NO EFFECT
SULFURIC ACID 93% H2SO4 – NO EFFECT

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 is 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.

DISCLAIMER: The data and information contained herein doesn't create a material or sales specification. The information contained in this data sheet does not guarantee that any hazards listed herein are the only one(s) which may occur. Product and application instructions are provided for the purpose of establishing a general profile and that they will meet Freedom Chemical Corporations current published physical properties. Freedom Chemical Corporation makes no claim as to the accuracy of the information, but every effort has been made to ensure the accuracy of information contained in the Technical Datasheet. The end user should check the suitability of this product for its intended application prior to use.