



Chemical® Corporation

SealFlex® Aromatic Polyurea

Technical Data Sheet

PRODUCT DESCRIPTION

Freedom Chemical Corporation's SealFlex® is an odorless 100% solids elastomeric two-component spray applied aromatic polyurea, used as a protective waterproof coating and designed for the GuardianDeck® and GuardianGreen® systems. SealFlex® is used in commercial, industrial and manufacturing atmospheres, on concrete, wood and metal surfaces. Its quick gel and 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

- ✦ Meets the Polyurea Development Association and NACE's 6A198 definition for polyurea coatings
- ✦ Can withstand constant water immersion
- ✦ Excellent for low temperature applications
- ✦ Complies with VOC and SCAQMD requirements
- ✦ No noxious odors

RECOMMENDED USES

- ✦ Green Roofs
- ✦ Transportation Facilities, Loading Docks
- ✦ Mechanical Rooms
- ✦ Parking Structures, Rooftop Garages
- ✦ Sports Complex's

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

ASTM F 710-08-Standard for preparing concrete floors to receive resilient flooring, section 5.3 ph.

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 13/NACE No. 6, Surface Preparation of Concrete.

COLOR

Blue – Add color to part-B only.

SealFlex® is not UV stable - aromatic polyureas are known to darken in color when exposed to UV and/or sunlight. This discoloration has shown to have little to no effect on the integrity of aromatic polyureas.

PACKAGING

53 gallons (200.6 liters) part-A isocyanate and 53 gallons (200.6 liters) part-B resin packaged in 55 gallon (208.19 liter) drums.

MIXING PROCEDURES

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

Do not dilute SealFlex® under any circumstances.

Adequately blend SealFlex® part-B Resin with air driven power tools making sure not to encapsulate any air until the mixture and color is consistent.

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

PRIMER/COVERAGE RATES/APPLICATION

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.

Mix primer part-A and part-B (a minimum of 2 minutes is recommended) and apply it to the surface (coverage rates are approximate and may vary based on the roughness/porosity of the concrete and may require more than one coat of primer) with FT-6160, FT-6160-FS, FT-6100-MT for concrete and MT-6175 for metal only, at a rate of 1 gallon (3.785 liters) per 300 square feet (27.8709 m²). Apply with a squeegee, brush, phenolic core roller or spray.

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

Prior to application: Precondition both part-A and part-B to 75° F (23.88° C) - 80° F (26.66° C) before applying.

Fit part-A with a desiccant drying device.

Apply *SealFlex*® 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 each

Spray apply *SealFlex*® at 3 gallons (11.356 liters) per 100 square feet, to the substrate in sufficient quantity to obtain a minimum of 48 dry mils (1219.2 microns) over the entire surface.

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

Recoat *SealFlex*® within 0 – 6 hours of previous coat.

Optional: Substrate adhesion test should be performed seven days after application of *SealFlex*®.

EQUIPMENT CLEAN UP

Immediately clean equipment with an environmentally safe solvent, as permitted by local regulations. Cured or dried material may 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 solely for the purpose of determining qualification for warranty.

STORAGE

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

Storage temperature for part-A and part-B is between 60° F (15.55° C) - 90° F (32.22° C), avoiding freezing temperatures.

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

Keep containers sealed tightly to eliminate any condensation, moisture, or water contamination in part-A or part-B.

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 *SealFlex*® 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

SealFlex® contains Isocyanates

TECHNICAL DATA

MIX RATIO BY VOLUME.....	1A:1B
GEL TIME @ 150° F (66° C).....	4 SECONDS
TACK FREE TIME (DEPENDS ON THICKNESS & SUBSTRATE TEMPERATURE).....	7 SECONDS
RECOAT TIME.....	0 - 6 HOURS
DENSITY (SIDE A & B COMBINED).....	1.078 LBS/GAL
VISCOSITY AT 75° F (24° C), BROOKFIELD:	
PART-A	800-1200 CPS
PART-B	300-600 CPS
SHORE HARDNESS, ASTM D-2240	50 D
TENSILE, ASTM D-412	4100 PSI
ELONGATION, ASTM D-412	380%
TEAR, ASTM D-412	690 PLI
TOUGHNESS, ASTM D-412	8400 PSI
WATER VAPOR PERMEABILITY ASTM E-96	0.361 P/INCH
VOC CONTENT	0 G/L
RETURN TO SERVICE: FOOT TRAFFIC.....	1 HOUR
RETURN TO SERVICE: FULL SERVICE	6-24 HOURS
TABER ABRASION RESISTANCE, ASTM D-3389 (H18 WHEEL, 1000 CYCLES, 1 KG LOAD) (MAXIMUM).....	349 MG LOSS
WATER ABSORPTION, ASTM D-453 (MAXIMUM 73° F (23° C), 24 HOURS)	<1%
IMPACT RESISTANCE @ 77° F (25° C) (ASTM D-2794)	PASSED
PULL-OFF STRENGTH (MINIMUM), ASTM D-4541 INTER-COAT ADHESION (WITHIN RECOAT TIME)	EXCELLENT
LINEAL SHRINKAGE	1 - 2%
FLEXIBILITY (1/8" 3 MM MANDREL BEND TEST) ASTM D-522.....	PASSED
TOTAL SOLIDS BY WEIGHT, ASTM D-2369.....	100%
TOTAL SOLIDS BY VOLUME, ASTM D-2369.....	100%
BOND STRENGTH, ASTM D4541 (PRIMED SUBSTRATE)	
CONCRETE FAILED AT	500-700PSI
STEEL EXCEED.....	1400PSI
WOOD FAILED AT	200-250PSI
VOLATILE ORGANIC COMPOUNDS ASTM D-2369...0 LB/GAL, 0 GM/LITER	

NOTE: PHYSICAL PROPERTIES MAY VARY ON THE TYPE OF SPRAY 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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