



FX-645

Brushable Aliphatic Polyurea Coating

DESCRIPTION:

FX-645 Brushable Aliphatic Polyurea Coating is a two component, 100% solids polyurea. This fluid applied, brushable aliphatic polyurea is available in fast set and extended set versions. It cures in minutes to provide a tough chemical and abrasion resistant coating. **FX-645** is recommended for use in areas such as tank linings, exterior steel, water and wastewater facilities and floor and deck coatings. It can be used in many aggressive industrial environments. It may be applied up to 12 mils DFT per coat and achieve unlimited film thickness in consecutive, multiple applications.

ADVANTAGES:

- * Fast cure: 10-minute gel time at 70°F which can be mixed, applied and put in service within 2 hours.
- * Extended potlife version; cure 30 minute gel time at 70°F which can be mixed, applied and put in service within 2 hours.
- * No VOC
- * Chemical resistant
- * Can be used to repair or touch up damaged spray applied polyurea coatings
- * Excellent physical properties including high adhesion, tensile strength and abrasion resistance.
- * High thermal stability at temperatures up to 350°F.

PHYSICAL PROPERTIES:

Mix Ratio By volume 1A to 1B

Cured Properties—Normal Cure

Gel time, minutes at 70°F	10
Surface at 70°F in 30 minutes	tacky
Surface at 70°F in 2 hours	tack free
Full Cure	5 days

Cured Properties—Extended Cure

Gel time, minutes at 70°F	30
Surface at 70°F in 30 minutes	tacky
Surface at 70°F in 2 hours	tack free
Full Cure	5 days

Shore D Hardness	65
Tensile strength, psi	3200
Elongation, %	450
Tear strength, pli	310
Remains flexible in temperature range of	
-45°F to 200°F	
1000g 1000 rev CS-17	<5 mg.

Flash Point, Components	>200°F
Flexibility Testing	>160 in-lbs
(1/32" steel panels)	
Gardner Impact	Direct and Indirect
Moisture Vapor Transmission	0.025 perm
ASTM E 96	
Abrasion Resistance (wt. loss mg)	
ASTM D 4060	
1000g 1000 rev H-18	200mg.
Color	White, Black, Light Gray, Dark Gray, Beige, Brick Red, Safety Yellow
Bond Strength	
Concrete	375 psi
Steel	1,750 psi
Wood	200 psi

SURFACE PREPARATION:

Steel Surfaces—Prepare in accordance with Steel Structures Painting Council Surface Preparation SSPC-SP6 to SP10 near-white metal blast cleaning. All work blasted should be coated the same day.

New concrete: Remove laitance by acid etching, abrasive blasting or water blasting. Old concrete—abrasive blast or water blast to remove laitance and contamination.

Polyurea: Less than three days old solvent wipe with acetone or MEK and apply **FX-645**; if more than 3 days old roughen surface with abrasive sanding. Solvent Wipe with Acetone or MEK and apply.

Project Conditions: Surface must be structurally sound, dry, and uncontaminated. Concrete must be free of voids, bug holes, honeycombs and delaminations.

MIXING:

FX-645 is a plural component polyurea system. Equal volume parts of the Part A resin and Part B hardener should be mixed in small 1 pint batches. **Always** add the Part B hardener to the Part A resin.

APPLICATION:

FX-645 may be applied by brush, roller or squeegee. Concrete surfaces shall be primed **FX-641 Primer**. Apply **FX-645** to achieve the required mil thickness with 50% overlaps. Aggregate broadcast may be applied if non-skid surface is required.

FX-645 can be applied at temperatures from 35°F to 120°F. Apply to achieve the required mil thickness with 50% overlaps.

(continued on back)

PACKAGING:

FX-645 is packaged as a 2 quart, 2 gallon unit and 10 gallon unit.

LIMITATIONS:

FX-645 is an aliphatic based polyurea system. Consult chemical resistant chart for corrosive environment applications. Do not install in hydrostatic or moisture/vapor conditions.

SHELF LIFE:

Six months minimum when stored at 75°F and dry conditions. **FX-645**, like most construction materials, must be stored in a dry, well protected and suitable storage environment. Keep containers sealed.

CAUTION:

Contains aliphatic isocyanates. Avoid breathing vapors. Avoid contact with skin and eyes. Do not ingest. Keep away from food-stuffs and wash thoroughly before smoking or eating. Should skin contact occur, wash skin well with soap and water. Should eye contact occur, flush thoroughly for at least 15 minutes with water. Get medical attention.



Member, Polyurea Development Association