



# FX-646

## Sprayable Aliphatic Polyurea Coating

### DESCRIPTION:

**FX-646 Sprayable Aliphatic Polyurea Coating** is a two component sprayable aliphatic polyurea. It dries in seconds to provide a tough chemical and abrasion resistant coating. As an aliphatic polyurea, **FX-646** is color fast and will resist yellowing from Ultra Violet light exposure. Typical working times of one minute or less can be expected. This fast reaction requires a fast, efficient mixing technique so that the mixture can be applied within the short gel times. Impingement mixing from available two-component spray machinery is efficient and entirely adequate.

### ADVANTAGES:

- Fast cure. Minimal downtime. May be walked on within 60 seconds.
- Excellent adhesion to a variety of substrates
- 100% solids, no VOC, low odor
- Seamless and waterproof
- Resistant to many chemicals
- Flexible: will bridge cracks
- High thermal stability at temperatures up to 350°F
- Unlimited DFT in a single application
- Cures from -20°F to 225°F

### PHYSICAL PROPERTIES:

|  |  |
|--|--|
| Finish   | Semi-Gloss   |
| Color  | Gray, Black, Tan<br>Custom colors available upon request |
| Volume Solids  | 100%   |
| VOC  | 0  |
| Mix Ratio  | 1A : 1B by volume<br>1.08/1.00 by weight                 |
| <u>Drying Properties @ 30 mils wet @ 73°F and 50% RH</u> |  |
| Gel time, seconds  | 45   |
| To touch   | 3 minutes  |
| To recoat  | 3 minutes minium<br>16 hours maximum                     |
| Surface at 1 hour  | tack free  |
| Full Cure  | 7 days   |
| <u>Cured Properties</u>                                  |  |
| Elongation, %  | 750  |
| Tear strength  | 500 pli  |
| Shore D Hardness,  | 54   |
| Tensile strength, psi                                    | 2400   |
| Remains flexible in temperature range of                 | -45°F to 200°F   |
| Flash Point, Components                                  | >200°F   |

|                                   |                      |             |
|-----------------------------------|----------------------|-------------|
| Gardner Impact                    | Direct and Indirect  | >160 in-lbs |
| Moisture Vapor Transmission       | ASTM E 96            | 0.025 perm  |
| Abrasion Resistance (wt. loss mg) | ASTM D 4060          |             |
|                                   | 1000g 1000 rev CS-17 | 6 mg.       |
| Bond Strength                     |                      |             |
|                                   | Concrete             | 350 psi     |
|                                   | Steel                | 1,500 psi   |
|                                   | Wood                 | 450 psi     |

### SURFACE PREPARATION:

Contact Fox Industries, Inc. Technical Representative for detailed surface preparation guideline requirements. Each individual application or installation is unique.

General surface preparations guidelines:

#### Steel:

Immersion Service: Minimum SSPC-SP10, Near-White blast cleaning.

Non-Immersion Service: Minimum SPC-SP10, Near-White blast cleaning

#### Concrete:

Allow new concrete to cure 28 days. Abrasive blast all concrete and refer to SSPC-SP13/NACE 6 Standard. Concrete must be clean, dry and sound with a sufficient pro file.

#### Galvanized and other substrates (Geotextile applications):

Surface preparation will vary depending on exposure. Consult with a Fox Industries Technical Representative for specific guidelines or instructions.

### APPLICATION:

Specialized plural component spray equipment is needed. Please consult with Fox Industries for proper equipment procedures and information.

Use only heated plural component equipment capable of producing 2000 to 3000 psi and 2 gallons per minute output consistency with approximate material heaters.

(OVER)

Maintain temperature at a range of 140°F to 160°F. A 50% overlay on each spray pass of the gun is recommended to avoid holidays, pinholes and achieve consistent film thicknesses.

A cross hatch spray pattern is strongly encouraged.

#### PACKAGING:

**FX-646** is packaged as 10 gallon and 100 gallon units.

#### LIMITATIONS:

**FX-646** 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. Keep containers sealed.

#### STORAGE:

**FX-646 MUST BE STORED IN** a dry, well protected and suitable storage environment **WITH TEMPERATURE BETWEEN** 60 and 85°F. Protect from freezing.

#### SAFETY:

Refer to MSDS sheet prior to use.

#### CAUTION:

Contains organic isocyanates MDI. Avoid breathing vapors. Avoid contact with skin and eyes. Do not ingest. Keep away from foodstuffs 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*