POLYUREA COATINGS

General Description: Polyurea coatings are characterized as plural-component, fast-curing elastomeric coatings.

Polyurea coating chemistry varies widely between formulations; some are classified as hybrid polyureas and/or hybrid polyurethanes. Most Polyurea coatings are aromatic, but some aliphatic versions are available. Polyurea coatings provide a very tough coating that can be applied in a wide range of weather conditions. Aromatic polyurea coating colors can change or fade with weathering.

Compatibility with Other Coatings: Polyurea coatings can be top-coated with other polyurethane coatings or other polyurea coatings, although the top-coating time frame is short, and a primer may be required for good intercoat adhesion.

Minimum Dry-film thickness: Dry-film thickness (DFT) will range from 0.5–1.0 mm (20–40 mils) depending on the system used. The specified thickness is dependent on existing project conditions and the manufacturer's recommendations.

Application Recommendations:

i. SURFACE PREPARATION: The SPF substrate should be clean, dry, and free of UV degradation.
ii. NUMBER OF COATS: The coating should be applied in a minimum of two separate coats. Each coat should be applied at right angles to the previous coat (cross-hatching), and it is common practice to install subsequent coats immediately using the cross-hatch method.
iii. CURE TIME: Aromatic and aliphatic polyurea coatings cure and dry to the touch in 3 sec.–20 min. and are usually completely cured in 10–24 hours at 75°F. Cure times may vary depending on temperature, humidity, and coating thickness.
iv. AMBIENT TEMPERATURE REQUIREMENTS: Apply between 2–43°C (35–110°F).
v. EQUIPMENT REQUIREMENTS: Vary with specific system. Spray polyurea coatings with plural-component equipment as recommended by the coating manufacturer. (See SPFA-144 Coating Equipment Guidelines.)

Limitations:

vi. Polyurea coatings cure very quickly and are sprayed with plural-component spray guns which can limit touch-up and detail work.
vii. Polyurea coatings have a very short time frame for over-coating or tying into coatings that have already been applied.