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**TECHNICAL DATA**  
**RUFF STUFF 2100 COAL TAR EPOXY**

**COATING DATA**

**DESCRIPTION:**

A two-component, high solids, chemically cured, ceramic modified coal tar epoxy. Ruff Stuff 2100 is a unique and outstanding barrier coating formulated for the protection of steel and concrete exposed to aggressive chemical environments. Ruff Stuff 2100 has been successfully protecting steel and concrete subjected to sanitary sewage and other aggressive chemical agents for more than three decades. Ruff Stuff 2100 meets or exceeds the performance requirements of the Corps of Engineers formulation C-200 and Steel Structures Painting Council formulation SSPC-16.

**USE:**

Use as a protective barrier coating on steel or concrete exposed to sanitary sewage and other aggressive agents. It also is ideal for protecting steel and concrete immersed in fresh, sea, and chemically contaminated water. Recommended for steel which is cathodically protected by sacrificial anode or impressed current.

**PERFORMANCE:**

PANEL: Steel.

PREPARATION: SSPC-SP 10/NACE 2 Near-White Blast Cleaning

SYSTEM: Two coats Induron Ruff Stuff 2100 @ 10 mils per coat. 20 mils total dry film thickness.

TEST	METHOD/CONDITIONS	DURATION	RESULTS
Salt Spray	ASTM D 117	3,600 Hours	No Blisters or Undercutting @ Scribe.
Water Immersion	115°F, 46°C	8,760 Hours	No Effect
25% Sodium Hydroxide	140°F, 60°C	8,760 Hours	No Effect
3% Sulfuric Acid	120°F, 50°C	1,200 Hours	No Effect
5% Sodium Hypochlorite	77°F, 25°C	1,440 Hours	No Effect
5% Sodium Bisulfite	77°F, 25°C	720 Hours	No Effect
Cathodic Disbondment	ASTM G 8-85 Method A	720 Hours	No Disbondment
Direct Impact	ASTM D 2794		120 in./lbs.
Permeability	ASTM E 96		0.13 Perm

**LIMITATIONS:**

Do not use for immersion in concentrated solutions of mineral acids or organic acids. Not for potable water. Maximum continuous immersion service temperature is 120°F (49°C). Maximum continuous non-immersion service temperature is 200°F (93°C).

**SURFACE PREPARATION:**

**Steel (Immersion in water)** - SSPC-SP 10/NACE 2 Near-White Blast Cleaning. **(Chemical immersion)** - SSPC-SP 5/NACE 1 White Metal Blast Cleaning

**Steel (Non-Immersion)**—SSPC-SP 6/NACE 3 Commercial Blast Cleaning.

**Ductile Iron**—Remove all surface contaminants by abrasive blasting per NAPF 500-03-04. Do not coat surfaces previously coated with asphalt.

**Concrete** - New concrete must cure for at least 28 days. Verify dryness by testing for moisture per

“ASTM D4263 Plastic Sheet Method”. Apply to clean, dry and sound concrete substrates that are free of all curing compounds, oils, greases or any other contaminants. All concrete surfaces shall be made free of voids, cracks and other imperfections using Induron EFS 707 Epoxy Surfacer or Induron Mortarchem. Prepare the surface per ICRI 310.2 to achieve surface profile to meet a CSP 3-4.

**Recoating** - Multicoat systems may require this product to be recoated. This product does not require scarifying the surface prior to being recoated with itself within 30 days. Before recoating, remove all chalk and any other surface contaminants. After 30 days the surface must be abraded to provide a profile similar to 60 grit sandpaper.

**Aluminum and Galvanized Steel**—Prime with Induron Vinyl Wash Primer.

**PRIMER:**

Not normally required. If necessary, prime steel with Perma-Clean II Primer, Induramastic 85 or Indurazinc MC-67.

**COVERAGE:**

Theoretical -1123 ft<sup>2</sup> per gallon at 1.0 mil dry film thickness.

**DRY FILM THICKNESS:** 7.0 to 20.0 mils per coat.

**WET FILM THICKNESS:** 13.0 to 29.0 mils.

## APPLICATION DATA

**BLEND RATIO:**

One part Ruff Stuff 2100 Blending Resin to 9 parts Ruff Stuff 2100 Activator Black by volume. Power agitate until components are thoroughly mixed. Allow mixed components to stand fifteen minutes prior to application.

**POT LIFE:** Six hours at 90F, 12 hours at 70F, 18 hours at 50F.

**APPLICATION:**

**Airless Spray**—Use .029 tip; 30 mesh filter; 30:1 Pump ratio at 80-100 psi operating air pressure. **Roll**—Use lambswool cover. Additional coats may be required to achieve desired film thickness. **Brush**—Use natural bristle brush. Additional coats may be required to achieve desired film thickness.

**THINNING:**

If required, thin up to 10% with K-1066 Reducer. Clean equipment with K-1066 Reducer.

**CLIMATE:**

Use this product only if the substrate temperature and ambient air temperature is above 40°F and is expected not to decrease for at least two hours after application. Also, the substrate temperature must be 5°F above the dew point for a period of at least two hours after application to avoid condensation occurring on wet paint.

**DRY TIME:**

TO HANDLE - Six hours at 90F, 12 hours at 70F, 24 hours at 50F.

TO RECOAT – at 50°F - 72 hours; at 75°F - 18 hours; at 90°F - 12 hours.

IMMERSION SERVICE—Allow a minimum of 7 days with proper ventilation before immersion.

**Note:** Lower temperature, higher film build, and/or poor ventilation will retard dry time.

**PHYSICAL DATA:**

VOLUME SOLIDS: 70% ± 2%

SOLIDS BY WEIGHT: 73% ± 2%

WEIGHT PER GALLON: 8.4 ± .2 lbs./ gallon (mixed)

VOLATILE ORGANIC CONTENTS:

Mixed (unthinned) - < 2.4 lbs./gallon; < 285 grams/liter

Mixed (thinned 10%) - < 2.8 lbs./gallon; < 340 grams/liter

**SAFETY DATA:**

See individual product label for safety and health data information. Individual Material Safety Data Sheets are available upon request.