TIGER SHIELD System

for superior corrosion protection (recommended for marine environments and coastal regions)

Product Description
The TIGER Drylac SHIELD System is a two-coat process combining optimum corrosion protection with highest weatherability.

The basis for the excellent corrosion resistance is either TIGER Drylac Zinc Rich Primer 69/90500, TIGER Drylac Dryprotective Primer 69/70000 or TIGER Drylac 09/73841 Out-gassing Forgiving Primer. This two coat system warrants an optimum non-porous film as well as excellent UV protection through the use of high quality polyester powder coatings.

Processing
Electrostatic and Tribo/Airstatic spraying, manual or automatic. All primers must be applied over a clean dry substrate, free of any contaminates and oxidation. Note: Time elapsed between application of TIGER Drylac 69/90500 Dryzinc Primer and topcoating with TIGER Drylac Series 38 Polyester must not exceed 12 hours max.

Steel/Iron

Topcoat: TIGER Drylac Series 38

TIGER Drylac 69/90500 Zinc Rich Primer or TIGER Drylac 69/70000 Dryprotective Primer

Properly sandblasted **Iron/Steel** including **Structural Steel**

Aluminum

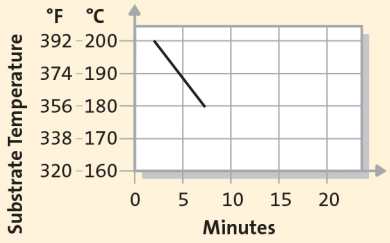
Under normal conditions a single coat of Series 38 powder coating is sufficient. In highly corrosive environments, as is found in coastal regions or industrial atmospheres, a 2-coat system comprised of TIGER Drylac Dryprotector 69/70000 plus a topcoat of Series 38 can be beneficial. Both products are engineered to complement each other and offer an excellent corrosion barrier. For objects exposed to extreme conditions, especially where there is a possibility of filiform corrosion, Chromate Conversion coatings or Chrome Phosphatizing has been proven to be an excellent pretreatment choice.

Cast Aluminum and Cast Steel

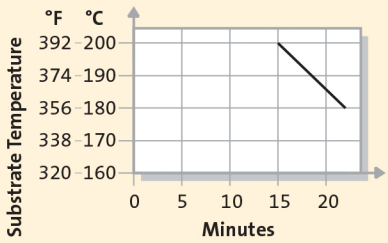
For porous substrates that are prone to out-gassing we offer a Out-gassing Forgiving Primer — TIGER Drylac OGF Primer 09/73841. For technical information and specific curing parameters please see our datasheet number 1304 online at www.tiger-coatings.us (download area, data sheets).

Cure Parameters
TIGER Drylac Zinc Rich and Dryprotector Primer
In general, we recommend only partial rather than full cure for the first coat.

First Coat
69/90500 or 69/70000



Second Coat
Series 38



Specific Gravity
TIGER Drylac Series 38: 1.2–1.8 g/cm3 depending on pigmentation.
TIGER Drylac 69/90500 Zinc Rich Primer: 2.72 ± 0/.1g/cm3
TIGER Drylac 69/70000 Dryprotector Primer: 1.52 ± 0/.1g/cm3

Theoretic Coverage
Depending on pigmentation and processing conditions and a specific gravity of 1.5, 1 lb coats approximately 50 sq. ft. at 3 mils avg. 1 kg coats approximately 10 sq. m. at 75 microns avg.

Test Results on Aluminum:

Corrosion Resistance Humidity Resistance 3000 hrs.—ASTM D 2247	Formation of blisters not to exceed "few" blisters size #8 as shown in Figure 4.0 ASTM D 714	No blistering
Salt Spray Resistance 3000 hours – ASTM B 117	Minimum rating of 7 on scribe or cut edges, and a minimum blister rating of 8 within the test specimen field, in accordance with the Table 1 and Table 2 Reference modification of ASTM D 1654	No blistering, no undercutting

Test Results on Steel:

Salt Spray Resistance* ASTM 117-90	Undercutting	Blisters	Adhesion
1000 hour	0	m0 / g0	Gt0
2000 hour	0 – 1	m0 / g0	Gt0
3000 hour	2 – 3	m2 / g1	Gt0

*Tested on a 2-coat system of Series 38 and TIGER Drylac® 69/90500 Zinc Rich Primer (substrate: steel—sandblasted)

Mechanical Properties:

Test	Results for basecoat alone 69/90500	Two-Coat System TIGER Drylac 69/90500 + TIGER Drylac Series 38
Film Thickness	2.4-2.6 mils/60±5µm	2.4-2.6 mils/60±5µm (Primer) 2.4-2.6 mils/60±5µm (Topcoat) Minimum requirement for a non-porous film!
Cross Hatch Adhesion ISO 2409 / ASTM D 3359	pass 100%	pass 100%
Mandrel Bending Test ISO 1519 / ASTM D 522	5/32 in. /4 mm (3/16 in./5 mm)	3/8 in./10 mm
Impact test 1/10 in. Distortion ISO 6272 / STM D 2794-90	up to 40 in./lbs. (up to 20 in/lbs.)	up to 40 in./lbs. (up to 20 in/lbs.)
Cupping ISO 1520	5/16 in./8 mm (3/16 in./5 mm)	5/16 in./8 mm (3/16 in./5 mm)

Data in "( )" reflects properties valid for TIGER Drylac 69/70000 Dryprotector.