

PERMALAC[®] CLEARCOAT

METAL • WOOD • STONE

Tougher than all outdoors!

The Saltwater Test

A major research study at an independent laboratory was undertaken to establish the resistance of Permalac 2K and Permalac EF to the abuse of constant saltwater spray. As this is one of the most corrosive environmental assaults confronted by any outdoor lacquer, a high endurance level will virtually ensure a coating will stand up in other harsh environmental conditions. For control purposes the independent laboratory included another popular two-component, crosslinked polyurethane outdoor clear coat lacquer in all phases of the testing and evaluation procedures.

Testing Procedure

To conduct the comprehensive testing of the coatings, separate 3" x 6" plates of steel were coated with Permalac EF (less than 170 grams of VOCs per liter), Permalac 2K (the super-durable two-part clearcoat) and a competitive two-part lacquer also intended for outdoor applications. All coatings were cured for 24 hours to leave a dry film of about 1.0 mils (25 microns) thickness. The steel plates were then etched with diagonal lines, which cut

through the coatings to the substrate and ran from corner to corner.

Each sample was then confined in a cabinet maintained at 95°F (35°C) and subjected to a constant 5% saltwater spray. In evaluations taken after 100 hours, 200 hours, and 300 hours, the integrity of the bond between the coating and the substrate could be determined by the level of corrosion emanating from the etched "X" marks.

The two-component product used as a control was selected by the test laboratory because it had an established reputation for long service in the field. This meant it could be used as a benchmark for evaluating the test results achieved by the two Permalac products. Much to the surprise of the technicians, the control was solidly outperformed by both Permalac products. Even Permalac EF, which is a single-component product developed to reduce VOC levels, maintained bonding integrity after hours of saltwater spray far better than the control. You'll find photographic evidence of these test results on the back of this sheet.

ASTM corrosion rating	Result (100 hrs later)	Result (200 hrs later)	Result (300 hrs later)
Permalac 2K - 1	8	6	5
Permalac 2K - 2	8	6	6
Permalac 2K - 3	8	6	5
Permalac EF - 1	7	5	3
Permalac EF - 2	6	5	3
Permalac EF - 3	5	4	2
Popular Two-part, Crosslinked Polyurethane	7	3	

Scale: 10 = no rust 0 = rusted



Lab Photos of test results *(All panels cured at room temperature)*

