

Waterborne Paint: Interior Flash Rust - Water Test Procedure

This IICL Technical Bulletin (TB – 020) was created under the supervision of the IICL Technology Committee and is published in co-operation with the Container Owners Association.

Purpose: The objective of the water test procedures described below is to assist quality control inspectors in assessing the application of the water-based paint on the interior of containers. The test procedures described below were created for new build containers at the container factories. The use of water and the high humidity created by the test will help to expose areas where the paint layers have not dried sufficiently becoming vulnerable to flash rust.

In parallel, the test will assist to show and highlight voids, pinholes, cracks and low dry film thickness areas.



Recommended testing procedures.

1. Owner representative to randomly select two containers per shift for water test. One unit should be selected in the first half of the shift and another on the second.
2. Water test should start after the container has left the factory building for 48 hours (2 days).
3. For water testing purposes, the floor may be covered by a light plastic sheet.
4. Clean water should be sprayed from a hose or spray pump over the entire surface of the interior panels and frames. Light water pressure should not exceed 50 - 60 psi / 3.5 - 4.2 Kg/cm²). Water volume should be enough to wet all interior painted surfaces.
Photos above shows expected condition of roof and side panels immediately after water spraying.
5. After the interior is completely sprayed with water, close doors. The doors should remain closed for 72 hours (3 days) after closing; a seal may be used to prevent doors from being accidentally opened.
6. Upon opening doors, owner representative will inspect the interior of the container for signs of flash rust or any other paint defects.
7. In case flash rust or other paint defects are found, request factory to position two (2) additional containers produced during the same shift of the failed container for water testing. Notify owner of the reasons why the test sample is being expanded and provide date when test of the two additional units will be completed. Provide photos of the faulty condition(s) observed.
8. Repeat steps described on 4, 5 and 6 above.
9. Inspect and report individual results to owner including photos.
10. Once inspection is concluded and in order to drain excess of water and moisture from inside, position the container on the ground having the front of the unit raised by approx. 6 inches (15 cm). Open the doors to allow ventilation and water drainage.

End.