

## Question of the Month



**Q: Is there an easy way to test for chromates on hot-dip galvanized steel?**

**A:** ASTM B 201, *Standard Practice for Testing Chromate Coatings on Zinc and Cadmium Surfaces*, discusses standard practices for testing chromate coatings on zinc and cadmium surfaces. Testing for the type of chromate coatings most often applied in the galvanizing industry is included in Section 6.3 of this specification.

To test for a chromate coating on a galvanized coating, simply place one drop of lead acetate testing solution on the surface and wait five seconds. (Directions for preparing the lead acetate testing solution are included in Section 6.3.2 of ASTM B 201.) Remove the remaining testing solution by gently blotting it and ensuring not to disturb the deposit that may have formed under the liquid.

If a dark or black deposit or stain has developed, there is no chromate on the galvanized coating in that area. To verify test results, the lead acetate testing solution can be applied to a galvanized coating that was known not to have chromates applied to its surface.

A negative test result showing a chromate coating is not on the galvanized coating does not necessarily mean chromates were not applied. Chromates tend to last up to six weeks on the galvanized coating. In very wet or humid environments chromates can be consumed much quicker. If the chromates have been consumed, the chromate test described above would show a negative result for chromates being on the galvanized coating.



**Chromate Bath**