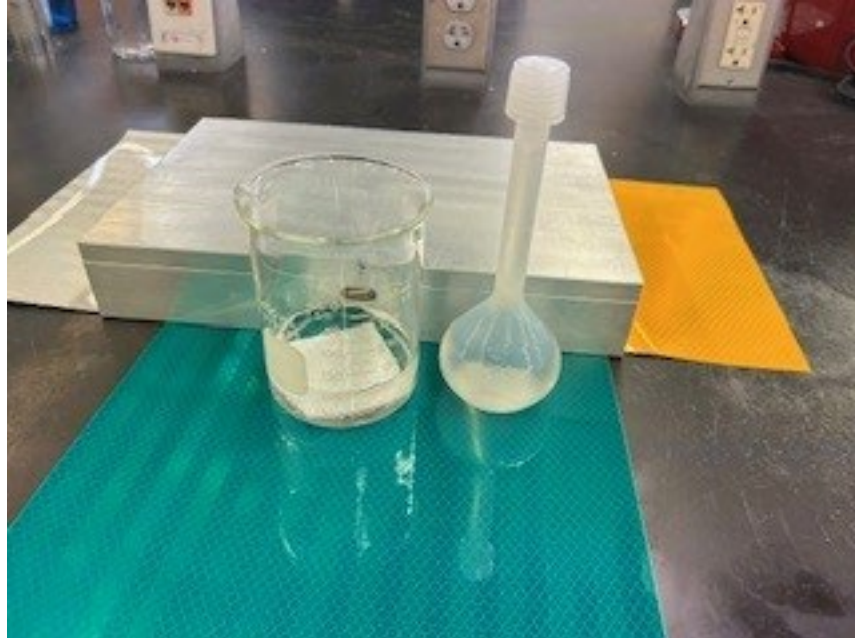


Quantitative Analysis of Chromate Coating



Description and Benefit

Chromate coatings are used to improve performance on aluminum substrates. Treated aluminum substrates are used for highway signs to extend the life of the signs from weathering and offers an adequate surface for adhesion of applied reflective sheeting. The standard test method for determination of chromate coating thickness on aluminum substrates is ASTM B449. Another standard method includes immersing the treated substrate in a caustic solution heated to an extremely high temperature and weighing the substrate before and after the caustic solution treatment. This method, like ASTM B449, is dangerous and hazardous and does not provide accurate results on a consistent basis. The proposed method provides a simplified, accurate, timely and a safe alternative to the procedures mentioned above. Increasing the longevity of highway signs, will save MoDOT a significant amount of money since replacement of signs will be dramatically reduced. This new process reduces the amount of hazardous chemicals used and limits the amount of waste generated. Results are accurate in less than two hours which benefits both MoDOT and its contracting partners on projects.

For More Information Contact

Central Office/Construction and Materials

Sam Marshall at Robert.Marshall@modot.mo.gov or 573-751-9252.