

Comparison of Traditional Copper Based and “Eco-friendly” Antifouling Paints in Preventing Biofouling

Antifouling paints are developed and designed to prevent marine organism from fouling a surface. In this study, two different priced copper-based antifouling paints; an “eco-friendly” paint and a control (shop primer) were evaluated to determine whether there was a difference in the degree of fouling. The paints were applied to wood treatment panels (10cm x 10cm) and placed on a constructed hanging apparatus deployed for 22 weeks in Castine Harbor, Maine during summer 2011. Panels were evaluated for percent cover, weight of accumulated biomass, and phyla of organisms present. There was significant difference in percent cover between all treatments as well as significant difference in weight accumulation between the control and the three treatments. Results suggest further a direct correlation between the price of paint and the effectiveness of preventing organisms from fouling substrate. This analysis suggests that the more expensive paint will prevent the highest degree of fouling compared to the less expensive antifouling paint. The “eco-friendly” treatment showed moderate effectiveness in preventing fouling falling between high priced paint and the low priced paint. Thus, these data are important as the antifouling paint industry expands and searches for the most effective and least environmentally impacting paints.