Performance of KDS-B, dispersed KDS-B, MCA, and ACQ in Ground Proximityand Ground Contact Decay Tests under Tropical Conditions

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Abstract

Southern pine samples treated with KDS-B, dispersed KDS-B, MCA, ACQ-D, and untreated were tested over 90-month period at Hilo, HI. For the ground proximity decay test according to AWPA E18, KDS-B at retention of 2.2 kg/m^3 with and without a water repellent performed similarly as with other AWPA standard preservatives (e.g. MCA at retention of 1.0 kg/m^3 and ACQ-D at retention of 2.4 kg/m^3); dispersed KDS-B at retention of 2.2 kg/m^3 performed better than the other preservatives. For the in ground field stake test according to AWPA E7, KDS-B at retention of 4.3 kg/m^3 have similar or better performance than MCA at retention of 2.6 kg/m^3 and ACQ-D at retention of 6.4 kg/m^3; dispersed KDS-B at retention of 4.3 kg/m^3 performed the best among the four preservative systems.

Harnessing the Power of Genomics to Create Better Wood Preservatives

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Abstract

There is an on-going need for wood products with a long and predictable service life. Understanding the limits of wood preservatives facilitates the development of new and improved formulations. In previous studies, we used DNA metabarcoding to find fungi and bacteria associated with carbon-based preservatives in soil contact. We then isolated a panel of bacteria that were preferentially associated with the preserved wood, and developed a test to evaluate the ability of these organisms to tolerate and detoxify wood preservatives. Understanding the mechanisms used by fungi and bacteria in tolerating or detoxifying wood preservatives will enable formulators to target specific genes or biochemical pathways to develop more targeted and effective wood preservatives. Meta-transcriptomics can be used to rapidly screen for gene expression patterns associated with certain wood preservatives. This technique could enable the identification of genes important in detoxification and tolerance to wood preservatives, thereby increasing our understanding of the biochemical pathways, and processes responsible for the breakdown of wood preservatives by bacteria and fungi involved.

Development of a New External Groundline Preservation Paste System

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Abstract

Poles, Inc. (Colorado Springs, CO) has developed a new external groundline preservative paste system, WP101-PRO™ (EPA Registration Number 88201-1), containing three active ingredients. Among topics discussed are the results of efficacy testing against decay fungi and wood destroying insects, diffusion of the active ingredients in wood, acute toxicology, physical and chemical properties, and storage stability.

A New Copper Fixation Process

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Abstract

A patent-pending method of fixing copper preservative systems is described. During treating, the process forms basic copper carbonate *in-situ* (inside the wood) and leaching tests show low copper losses similar to those of micronized copper formulations. The background, chemistry and properties of the process are given.