

**MALAYSIAN HARDWOOD TIMBERS: ADHESION OF FINISHING  
MATERIAL FROM DIFFERENT TIMBER SPECIES AND UNDER  
COATING LAYERS**

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## ABSTRACT

### MALAYSIAN HARDWOOD TIMBERS: ADHESION OF FINISHING MATERIAL FROM DIFFERENT TIMBER SPECIES AND UNDER COATING LAYERS

The adhesions of coating material (Nitrocellulose Lacquer) on Malaysian hardwood timbers were ascertained. The effects of different timber species such as Resak (*Vatica spp*), Chengal (*Neobalanocarpus heimii*), Keruing (*Dipterocarpus spp*), Meranti (*Shorea spp*), Kedondong (*Canarium spp*) and Rubberwood (*Hevea brasiliensis*) with different density and different number of undercoat layers (1, 2 and 3 layers) were determined. Each timber species were represented by 5 replicates with 150mm X 70mm X 12mm sizes. All the samples used air drying method to cure the coating. The Cross-cut Tape Test was used to determining the adhesions of coating material with the substrates. The film thickness of the coating material was determined by Wet Film Thickness Comb for measure the wet film thickness and then measure with Vernier Caliper after the coating was dried. The surface roughness of each species was determined by Portable Surface Roughness Tester (SRT-6210) randomly before coating. This study was using American Society for Testing and Material (ASTM D3359, 2009) for the standard testing and procedures. The result shows that surface roughness gives significant effect to the adhesion of finishing material with only one layer of undercoat.