



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.9, No.08 pp 532-540, 2016

Bond Strength of Natural *Euphorbia Abyssinica* Adhesive with Wood

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Abstract : An adhesive is a substance that fastens two surfaces together. The purpose of this study was to determine bond strength, effect of bond line thickness on strength of natural *Euphorbia Abyssinica* adhesive with wood. The single lap joint specimen pressed with 10 kg weight during bonding with the studied adhesive for 4 days and left for 5 days without weight to cure at room temperature and humidity, then after 11 days tensile test performed using Universal Testing Machine. The result shows that the bond strength of the studied adhesive with wood was found to be 14.76 MPa with standard deviation of 3MPa. The shear strength of the studied adhesive bond with wood was larger than adhesives like polyurethane and polyvinyl acetate bond strength. This paper concludes that the shear strength data found in this research could be used to predict failure strength of the bond during design so that the adhesive applied in assembling engineering product parts.

Key words: *Euphorbia Abyssinica* natural adhesives, curing time, single lap joint, polyurethane, polyvinyl acetate, shear strength.

Senthil Kumar.P.S et al /International Journal of ChemTech Research, 2016,9(8),pp 532-540.
