

ABSTRACT

Garbage can cause environmental problems. One type is glass waste and hair waste. Central Java Province has a significant annual increase in glass waste, reaching tens of thousands of tons. To reduce the amount of glass and human hair waste, optimal recycling can be carried out, so as to produce new materials that are environmentally friendly. This study examines the use of glass waste and human hair in the manufacture of composite boards as a substitute for high impact ABS (Acrylonitrile Butadiene Styrene) car dashboards. Composite board was made using cold pressing method with glass powder and hair as a result of alkalization with 5% NaOH solution for 60 minutes. Based on the results of the data obtained from the tensile and impact tests on the seven specimen compositions, including specimen 1 (17% glass powder, 3% hair, 80% polyester resin), specimen 2 (15% glass powder, 5% hair, 80% resin polyester), specimen 3 (12% glass powder, 8% hair, 80% polyester resin), specimen 4 (8% glass powder, 12% hair, 80% polyester resin), specimen 5 (5% glass powder, 15% hair, 80% polyester resin), specimen 6 (20% hair, 80% polyester resin), specimen 7 (20% hair, 80% polyester resin) with one test for each composition stated that there were no specimens that met the standards of ABS material HI, but there is one specimen composition that is almost close to the material strength indicator, namely in specimen 6 with a composition of 20% hair and 80% polyester resin which only passes the three criteria for tensile test results while in the impact test the material composition cannot meet the parameter values that have been set.

Keywords : *ABS, Alkalization, Cold Pressing, NaOH, specimen*