

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Nanoclay incorporation wood plastic composites are successfully prepared. The addition of MAPP results in a greatly improvement of both tensile and flexural strength without significant change in the modulus and impact strength. Thermal property of WPC declines due to the low decomposition temperature of MAPP. The water uptakes reduce as the MAPP is added due to the coating of MAPP on the wood particle surface which prevents the water penetration.

The effect of nanoclay results in the improvement of tensile and flexural strength without marginal alters in the modulus. The impact strength is slightly affected by the presence of nanoclay. Thermal stability of the composites improved due to the barrier effect arisen from the nanoclay dispersion. The water absorption reduces as nanoclay is incorporated due to the barrier effect of nanoclay.

Recommendations

1. Increase the MAPP content to find the maximum mechanical properties.
2. Blend nanoclay and PP prier the wood flour by which the complete exfoliation might be promoted.
3. Alter the wood content to observe its effect on water absorption, mechanical and thermal properties.