# LUDAI PARTICLES AS A FILLERS IN POLPROPYLENE THERMOPLASTIC COMPOSITE.

### Ву

Final Project Submitted in Partial Fulfillment for the Diploma in Wood Industries, Faculty of Applied Science, Universiti Teknologi MARA, Jengka Campus

JULIYA BINTI MOHAMED @ MOHD JUSOH

**SEPTEMBER 2002** 

#### **ACKNOWLEDGEMENTS**

Alhamdullilah, thanks to God.....

Sincere thanks to Assoc. Prof. Dr. Jamaludin Kasim, Program Head of Diploma in Wood Industry, UiTM Pahang, for his guidance, for the facilities and cooperation given during the course of study.

I would like to express my deepest appreciation sincere gratitude to my lecturer in WTE 375 (Project), En. Wan Mohd Nazri Wan Abdul Rahman for his encouragement and guidance in designing and implementing this project.

### **Table of Contents**

DEDICATION ACKNOWN LIST OF TA LIST OF FI ABSTRACT	L SHEETS ON LEDGEMENTS ABLES GURES	ii iii iv vii viii ix x
I	INTRODUCTION	1
11	LITERATURE REVIEW	3
	2.1 Ludai (Sapium bacattum)	3
	2.2 Polyprolen.	3
	2.3 Contruction.	4
	2.4 Development in naturals	5
	2.5 Potential of Lignocellulosic Thermoplastic composite	5
Ш	MATERIAL AND METHOD	8
	3.1.1 Saw dust preparation	8
	3.1.2 Blending with Polypropene	11
	3.1.3 Composite thermoplastic producing	11
	3.2 Evaluation of thermoplastic Composite	13
	3.2.1 Bending Test	13

3.1.2	14
3.2.2	15
Result and conclusion	16
Conclusion	22
References	. 23
Apendices	. 24
Vita	. 33

#### ABSTRACT

## LUDAI PARTICLES AS A FILLER IN PP THERMOPLASTIC COMPOSITE

BY

#### JULIYA BINTI MOHAMED @ MOHD JUSOH

#### SEPTEMBER 2002

This is a study of producing thermoplastic composite from sawdust of Ludai (sapium bacatum). Thermoplastic composite from Ludai is followed from 10%,30%, and 50%. Test such as bending, tensile, thickness, swelling and water absorption are carried out. The result showed that, 10% of sawdust of Ludai is very strength compare to 30% and 50%. The high content of PP to influences the results, as it will produce a perfect bounded between sawdust and PP. The thickness swelling and water absorption showed that the water could absorb into 50% than 30% and 10%. This is because wood are hydroscopic and more wood make it absorb more water. Generally, this composite produce can be use as a starting material for non-structural proposes.