

**MECHANICAL PROPERTIES OF WOOD  
PLASTIC COMPOSITE FROM KELEMPAYAN  
SPECIES (*Neolamarckia cadamba*)**

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## TABLE OF CONTENTS

	PAGE
<b>TITLE</b>	i
<b>APPROVAL SHEET</b>	ii
<b>ACKNOWLEDGEMENT</b>	iii
<b>TABLE OF CONTENTS</b>	iv
<b>LIST OF FIGURES</b>	vi
<b>LIST OF TABLES</b>	vii
<b>LIST OF ABBREVIATIONS</b>	viii
<b>LIST OF SYMBOLS</b>	ix
<b>ABSTRACT</b>	x
<b><i>ABSTRAK</i></b>	xi
 <b>CHAPTER 1: INTRODUCTION</b>	
1.1 Introduction	1
1.2 Problem Statement	2
1.3 Justification	2
1.4 Objectives	3
 <b>CHAPTER 2: LITERATURE REVIEW</b>	
2.1 Wood Composite In Malaysia	4
2.2 Kelempayan ( <i>Neolamarckia Cadamba</i> ) Wood	5
2.2.1 Physical Properties	6
2.2.2 Wood Working Properties	6
2.2.3 Seasoning Properties	6
2.2.4 Gluing Properties	7
2.3 Wood Plastic Composite	7
2.3.1 Definition	8
2.3.2 Physical and Mechanical Properties	9
2.3.3 Uses	9
2.4 Polypropylene	10
2.5 Filler Loading	11

### **CHAPTER 3: MATERIALS AND METHODOLOGY**

3.1	Source of Materials	12
3.2	Flowchart of Wood Plastic Composite Processing	13
3.3	Raw Material Preparation	14
3.3.1	Log Cutting	14
3.3.2	Debarking	14
3.3.3	Cut to Length	15
3.3.4	Chipping	15
3.3.5	Flaking	15
3.3.6	Screening	16
3.4	Wood Plastic Composite Board Produced	17
3.4.1	Measuring the Raw Material	17
3.4.2	Blending Process	18
3.4.3	Moulding Process	18
3.4.4	Hot Press	20
3.4.5	Cold Press	20
3.4.6	Composite Trimming	21
3.5	Mechanical Strength Testing	23
3.5.1	Bending Testing	23
3.5.2	Tensile Testing	23

### **CHAPTER 4: RESULTS AND DISCUSSIONS**

4.1	Bending Testing	25
4.1.1	Modulus of Elasticity (MOE)	25
4.1.2	Modulus of Rupture (MOR)	27
4.2	Tensile Testing	29
4.2.1	Modulus of Rupture (MOR)	29

### **CHAPTER 5: CONCLUSION AND RECOMMENDATION**

5.1	Conclusion	32
5.2	Recommendation	33

<b>REFERENCES</b>	34
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<b>APPENDIXES</b>	35
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<b>CURRICULUM VITAE</b>	51
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## ABSTRACT

### MECHANICAL PROPERTIES OF WOOD PLASTIC COMPOSITE FROM KELEMPAYAN SPECIES (*Neolamarckia cadamba*)

This research was producing wood plastic composite from Kelempayan species (*Neolamarckia cadamba*) wood dust. Wood plastic composite from Kelempayan species produced from two types of ratio (30:70 and 10:90) between sawdust (Kelempayan species) and plastic (Polypropylene) with the size of sawdust were 250 and 75  $\mu\text{m}$ . Mechanical testing were conducted in this research for bending and tensile strength. The result showed that sawdust from 75  $\mu\text{m}$  in size with ratio of 30:70 between sawdust and plastic is most suitable in producing wood plastic composite. It was concentered by bending testing that shown the wood plastic composite is very strength from 75  $\mu\text{m}$  in size with ratio of 30:70 between sawdust and plastic compare to the others. By using more Polypropylene (PP) in wood plastic composite can give advantage to the sawdust to bind each other with PP. The result of tensile testing also showed that the right amount of plastic and sawdust, could produce the board in extra strength and elasticity. Generally, using sawdust from 75  $\mu\text{m}$  in size with the ratio of 30:70 between sawdust and plastic is the most suitable percentage in mixing both of them for making the best wood plastic composite from Kelempayan species (*Neolamarckia cadamba*).