

**PROPERTIES OF PARTICLEBOARD FROM  
SESENDUK (*Endospermum Diadenum*)**

**By**

**AISA AMIRA BINTI MAT YUSOF**

**NOOR ADILAH BINTI SALAMAT**

**NORHASLINDA BINTI MOHD HASHIM**

**Final Project Paper Submitted in Fulfillment for the Diploma in Wood Industry  
Faculty of Applied Science, University Technology MARA**

**APRIL 2008**

TABLE OF CONTENTS	PAGES
<b>APPROVAL SHEET.....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iv</b>
<b>LIST OF FIGURE.....</b>	<b>viii</b>
<b>LIST OF PLATE.....</b>	<b>ix</b>
<b>LIST OF ABBREVIATION.....</b>	<b>x</b>
<b>ABSTRACT.....</b>	<b>xi</b>
<b>ABSTRAK.....</b>	<b>xii</b>

## **CHAPTER 1**

### **INTRODUCTION**

1.1 Malaysia Market.....	1
1.2 Problem Statement.....	2
1.3 Justification.....	2
1.4 Objective.....	2

## **CHAPTER 2**

### LITERATURE REVIEW

2.1 Sesenduk.....	3
2.1.1 Properties / Field characters.....	4
2.1.2 Uses of Sesenduk.....	5
2.2 Particleboard.....	6
2.2.1 History.....	8
2.2.2 Properties.....	9
2.2.3 Uses.....	10
2.3 Factors Affecting Board Properties:-	
2.3.1 Effect of Particle Size .....	11
2.3.2 Effect of Resin Content.....	11
2.3.3 Effect of Board Density.....	13

## **CHAPTER 3**

### MATERIAL AND METHOD

3.1 Field Characteristics.....	14
3.2 Material Preparation.....	14
3.3 Board making.....	14
3.4 Sample of cutting and Condition.....	16
3.5 Method of Testing:-	
3.5.1 Determination of Bending Strength.....	17
3.5.2 Determination of Internal Bond Strength.....	17
3.5.3 Determination of Thickness Swelling and Water Absorption..	18

## **CHAPTER 4**

### **RESULT AND DISCUSSION**

4.1 Mechanical and Physical Properties.....	19
4.2 Statistical Analysis.....	21
4.3 Effect of particle size .....	22
4.3 Effect of resin content.....	24
4.4 Effect of density .....	26

## **CHAPTER 5**

5.0 Conclusion .....	28
----------------------	----

<b>REFERENCES.....</b>	<b>28</b>
------------------------	-----------

## **APPENDICES**

Appendix 1.....	29
Appendix 2.....	31
Appendix 3.....	40

<b>VITA.....</b>	<b>49</b>
------------------	-----------

## **ABSTRACT**

### **PROPERTIES OF PARTICLEBOARD FROM SESENDUK (*Endospermum Diadenum*)**

**AISA AMIRA BINTI MAT YUSOF**  
**NOOR ADILAH BINTI SALAMAT**  
**NORHASLINDA BINTI MOHD HASHIM**

**APRIL 2008**

The manufacture of particleboard from the Sesenduk (*Endospermum Diadenum*). Particleboard respectively with 8, 10 and 12% urea formaldehyde (UF) and with particle size of 0.5 mm, 1.0mm and 2.0mm are used. There series of target density a board were produced i.e. 500, 600 and 700 kg/m<sup>3</sup>. This mixed will be made a board called particleboard after been cured by heat and pressure. The properties of this particleboard will be determined by several type of test. The result shows that the percentage of resin used, density and particle size are affecting the properties of the board. For the standard of evaluating this particleboard reach the value that been specified.