

PROPERTIES OF WOOD PLASTIC COMPOSITE FROM
8 AND 16 YEARS OLD PETAI BELALANG (*Leucaena leucocephala*)

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TABLE OF CONTENT

PAGE

| | |
|-----------------------------------|-------------|
| PROJECT TITLE..... | i |
| APPROVAL SHEET..... | ii |
| ACKNOWLEDGEMENT..... | iii |
| DEDICATION..... | iv |
| TABLE OF CONTENTS..... | v |
| LIST OF TABLES..... | ix |
| LIST OF FIGURES..... | xi |
| LIST OF PLATES..... | xii |
| LIST OF ABBREVIATIONS..... | xiv |
| ABSTRACT..... | xvi |
| ABSTRAK..... | xvii |

CHAPTER ONE

| | |
|-------------------|---|
| 1.0 Introduction | 1 |
| 1.1 Justification | 3 |
| 1.2 Objectives | 4 |

CHAPTER TWO

| | |
|---|----|
| 2.0 Literature Review | 5 |
| 2.1 Background and Introduction of Wood Plastic Composite | 5 |
| 2.1.1 The Benefits of WPCs | 7 |
| 2.1.2 Properties of WPCs | 8 |
| 2.1.3 Applications of WPCs | 9 |
| 2.2 Fillers | 10 |
| 2.3 Polypropylene | 11 |
| 2.4 Petai Belalang | 15 |

CHAPTER THREE

| | |
|--|----|
| 3.0 Materials and Methods | 19 |
| 3.1 Raw Material Preparation | 19 |
| 3.2 Bulk Density Analysis | 21 |
| 3.3 Wood Plastic Composite Process | 22 |
| 3.3.1 Melting and Blending Process | 23 |
| 3.3.2 Making Wood Plastic Composite Pallet | 25 |
| 3.3.3 Moulding Process | 27 |
| 3.3.4 Pressing Process | 29 |
| 3.4 Testing Methods | 31 |
| 3.4.1 Testing methods and sample sizes | 31 |
| 3.4.2 Tensile Testing | 33 |
| 3.4.3 Bending Testing | 34 |
| 3.4.4 Impact Testing | 35 |
| 3.4.5 WA and TS Testing | 36 |

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ABSTRACT

The wood plastic composite was produced using Petai Belalang (*Leucaena leucocephala*) as the filler and mixed with Polypropylene (PP). This study is to determine the effect of age and percentage filler loading on the mechanical and physical properties of wood plastic composite. Filler loading 10%, 30%, and 50% were tested by using two ages of Petai Belalang. The results for both age show that, the flexural modulus and tensile modulus increased when filler loading increase. The flexural strength and tensile strength decreased when filler loading increased. Adding more filler loadings will result increasing in percentage on water absorption and thickness swelling. Sawdust of Petai Belalang can be used as filler in the wood plastic manufacturing where mechanical properties are not very concern. The mechanical and physical properties between 8 and 16 year Petai Belalang are comparable.