

CHAPTER VII

CONCLUSIONS AND RECOMMENDATION

7.1 EFFECT OF ADHESION AREA

Load to peel adhesive large cover area is about three times more than small lining area .

7.2 EFFECT OF EACH COMPONENT

7.2.1 Wetting agent has positive effect for hotmelt adhesion in the range from 12.5% to 25%. The Delta value is 40 , mean that this additive has large effect to adhesion.

7.2.2 Wax has negative effect for hotmelt adhesion in the range from 1% to 5%. With moderate effect of Delta value of -25.1.

7.2.3 Plasticizer has negative effect for hotmelt adhesion in the range from 1% to 5%. And it has small effect of Delta value of -1.7.

7.2.4 Antioxidant has negative effect for hotmelt adhesion in the range from 0.5% to 2%. With small effect of Delta value of -1.

7.3 THE BEST HOTMELT ADHESIVE FORMULA

From experiment formula 10 give the best adhesion hotmelt .

7.4 EFFECT OF COMBINATION OF INGREDIENT

Equation for forecasting the peel streng is

$$\bar{Y} = 4.2 + (20A - 12.6B - 0.9C - D)/100$$

And experimental design can be used to predict formula and strength. But it has limit as amout of additives use in experiment. And can calculate the price of optimum adhesive formula.

7.5 RECOMMENDATION FOR FURTHER STUDY

In food packaging industry, sometime paper must be coated by wax to protect moisture loosing in frozen storage. Wax coating and low temperature freezing are the problem for this industry. Wax is hardly adhere by adhesive. And low temperature make adhesive film harder, may be brittle , then release from material surface.