PREPARATION AND EVALUATION OF NEW MODIFIED POLYESTERAMIDE RESINS

ATHESIS

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LIST OF ABBREVIATIONS

AV	:	*Acid Value*
OH. N	:	*Hydroxyl Number*
b.p	:	*Boiling Point*
m.p.	:	*Melting Point*
Sp. gr.	:	*Specific Gravity*
MFFT	:	*the minimum film forming temperature*
DEA	:	*Diethanolamine*
BTG	:	*3,6-dichloro bezo[b]- thiophene-2-carbonyl glutamic acid*
BTD	:	*3,6-dichloro bezo[b]- thiophene-2carboxylic acid bis-(2-hydroxy ethyl)-amide*
LO.	:	*linseed Oil*
F A	:	*Fatty Acid*
LOFA	:	*Linseed Oil Fatty Acid*
HELA	:	*N,N-bis(2-hydroxy ethyl)linseed oil fatty acid amide.*
PA	:	*Phthalic Anhydride*
PEA	:	Polyesteramide
PO	:	*Polyol*
M	:	*Molecular Weight*
E	:	*Equivalent Weight*
e_A	:	*Number of acid equivalents*
e_B	:	*Number of Hydroxyl Equivalent*
e_o	:	*Total Equivalents Present at the start of reaction*
m	:	*Number of moles*
m_o	:	*Total Moles Present at the start of reaction*
F	:	*Functionality*
K	:	*Alkyd constant (m_0 / e_A)*
R	:	*Ratio of total-OH groups to total-COOH groups* (e_B / e_A)
W	:	*weight*
Y	:	*Yield*
Ex	:	*Excellent (Almost no film defect*)
G	:	*good (very slight attack)*
F	:	*Fair (Partially Attacked)*
P	:	*Poor (Complete film failure)*
HD	:	*Hard Dry*
VST	:	*Very Slight Tackiness*
ST	:	*Slight Tackiness*
T	:	*Tacky*
a	:	*Air-Dried film*
s	:	*Stoved- film.*

AIM OF WORK

The Aim of present investigation is to develop a new modified polyesteramide resins. The chemical incorporation of biocide in the resins molecules is the main idea taken into consideration. This can be achieved chemically by partial replacement of polyols and polybasic acid used in the manufacture of polyesteramide resins by each of the following compounds, with expected biological activity, namely:

3,6-Dichloro-N,N-bis(2-hydroxy ethyl)benzo[b]thiophene-2-carboxamide (BTD) .

3,6-Dichloro benzo[b]thiophene-2-carbonyl glutamic acid (BTG) .

Such modification introduce the expected biologically active nuclei in the structure of the resin and consequently would affect their biological activity.

The course of the investigation may be divided into the following aspects:

1- Synthesis of the tow modifiers that mentioned above.

2- Incorporation of the prepared modifiers in various resin formulation.

3- Evaluation of the prepared resin as vehicles according to standard methods.

4- Studying the biological activity of the modified polyesteramid resins.

INTRODUCTION