



Thesis Title STUDY ON ETHYLENE GAS PERMEABILITY
OF ZEOLITE-LDPE AND ZEOLITE-SEBS
COMPOSITE FILMS

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ABSTRACT

In this thesis, the zeolite-LDPE composite film and zeolite-SEBS composite film were prepared and tested for ethylene permeation. The adsorbent for the composite film was selected from commercial zeolites namely ZSM5(50), ZSM5(280), Ferrierite and Beta, and synthesized silicalite. The composite films were characterized by TGA, DSC and SEM. Water vapor, oxygen and carbon dioxide permeations in the films were tested with gas permeability analyzer. Ethylene permeability of the film was tested in a permeation cell with continuous flow at an atmospheric pressure by on-line gas chromatography.