Morphology, thermal, and mechanical properties of EVOH/EAA blends prepared by solution blending method

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The hydrophilic polymeric resins such as ethylene-vinyl alcohol copolymer (EVOH), polyamide have frequently been blended with hydrophobic polyolefin resins to compensate drawback of each resin, yielding blend system with high performance. In this study, EVOH containing both hydrophilic and hydrophobic segmental units was blended with the ethylene acrylic acid copolymer (EAA) as a compatibilizer via solution blending method. Subsequently, the blended solution was casted onto glass substrate to obtain the films with a thickness of ~ 40㎛. We evaluate the compatibility of the prepared blend system by examining the effect of EAA content in EVOH/EAA blend on the resulting morphology, mechanical, thermal properties by using SEM, UTM, DSC instruments. It can be expected that the results obtained from this study would be utilized in the production of EVOH-based blend films with gas barrier performance.