The adhesion between the blend components is predicted to be enhanced by the formation of interfacial energetic regions, which could be associated with the formation of ester groups and carboxyl groups on the starch surface. The adhesion parameters calculated for the TPS_MA-g-SEBS blend suggest a good interaction between the starch and the compatibilizer, which is expected to improve the mechanical properties of the blend.

The minimal interfacial surface free energy and positive but minimal wetting coefficient in the TPS_MA-g-SEBS blend indicate a good interaction between the starch and the compatibilizer, which is expected to enhance the mechanical properties of the blend. The work of adhesion for the TPS_MA-g-SEBS blend confirms the good interaction between the starch and the compatibilizer, which is expected to improve the mechanical properties of the blend.

The absorption band at 1744 cm⁻¹ confirms the formation of an ester bond in the blend LDPE_TPS_MA-g-SEBS between hydroxyl group in the thermoplastic starch and anhydride in MA-g-SEBS suggesting the better interactions between LDPE and TPS by the addition of a compatibilizer.