Polyaniline has attracted considerable attention because of its good environmental stability, easiness and low cost of synthesis, and high conductivity. Nevertheless, Polyaniline exhibits poor mechanical properties and processibility due to its rigid conjugated structure. In this study, conducting polyblends were prepared by melt blending polypropylene with the Zinc dodecyl benzenesulfonate complexed polyaniline(ES). Conducting polyblends are expected to demonstrate attractive and versatile properties, especially the application for electrostatic dissipation(ESD). First of all, polyaniline and Zinc dodecyl benzenesulfonate were compounded and fluxed in a Brabender mixer at appropriate temperatures and rotational speeds. The comb-shaped structure and properties of the complex was investigated by X-ray, UV-VIS, XPS spectroscopy, TGA and Brabender mixer respectively. The zinc salt improved the processibility and thermalstability of polyaniline was understood from the compounds by Brabender mixer and thermograms of TGA. The self—assemabled behavior of ES with Zinc salt was observed by XPS spectroscopy and the comb-shaped structure can be defined by X-ray diffraction patterns. The delocalization of polarons in polyaniline was observed by UV-VIS spectra and can explain the observed chain extension phenomenon on the appropriate procession conditions. We chose the optimal polyaniline composition to mix with polypropylene in Brabender mixer for the conducting polyblend. The rheology and morphology of polyblends were investigated by Brabender mixer, DSC, and SEM. A low composition(polyaniline:5.47 wt%) and resistance (4.68×103Ω) of a conducting polyblend was obtained.