Laser light scattering measurements are employed to investigate the dynamics of entangled poly(ethylene oxide) with and without lithium perchlorate in melts. The single-exponential ACF relaxation mode was observed and exhibited $q^2$ dependence with and without salt in melts; behavior interpreted as due to the relaxation of a transient PEO network. The results of activation energy from the dynamic light scattering and viscometry measurements were compared. Static scattering measurements indicated that the structure factor exhibits a universal power law $I(q) \sim q^{2.0\pm0.1}$ in the melts; which agree with the prediction of the percolation theory. Furthermore, the results revealed that the level of entanglement of PEO chains is different depending on the existence of LiClO$_4$. 