

Flow-induced mixing and demixing in Polystyrene/Poly(vinyl methyl ether) blend system

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PS/PVME phase diagram was assessed by rheological tools and by on-line microscopy observations both under quiescent and shear flow conditions. Shear flow was found to induce both mixing and demixing of the mixture depending on the amplitude of the imposed shear rate. The overall obtained results will be discussed in terms of the amplitude of concentration fluctuation as compared to thermodynamical, kinetic and mechanical effects.