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**Segmental dynamics in polymer blends: adapting the Long-Lequeux model.** GARETH ROYSTON, PAUL SOTTA, DIDIER LONG, Laboratoire Polymeres et Materiaux Avances (FRE2911) — In recent years several models have been proposed which attempt to describe the distribution of relaxation times observed in glass forming systems as they approach vitrification. We have adapted the Long-Lequeux model, initially proposed for van der Waals liquids, for application to polymer blends. Considering thermally induced density fluctuations, the glass transition is considered to be controlled by percolation of small domains of slow dynamics. Here we present a comparison of the model with experimental data including recently acquired data on miscible blends of poly(alpha-methylstyrene) and poly(cyclohexyl methacrylate). The model is shown to provide a good fit to the data over a range of conditions.

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