

# **Flow induced instabilities near the two phase boundary**

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Flow induced polymer migration is of industrial interest for both protection of surfaces and as a failure mechanism of formulations. Polybutadiene/squalene solutions near the phase boundary were used to model such systems under flow. Utilizing a Multi-Pass Rheometer, phase separation from flow through confining geometries has been measured and determined to occur at a characteristic shear rate related to temperature. Notable concentration shifts in these solutions under shear have been observed with neutron reflectivity. The confirmation of polymer migration and finding of a characteristic onset condition will allow for the testing and development of improved computation models and better understanding of these systems.