

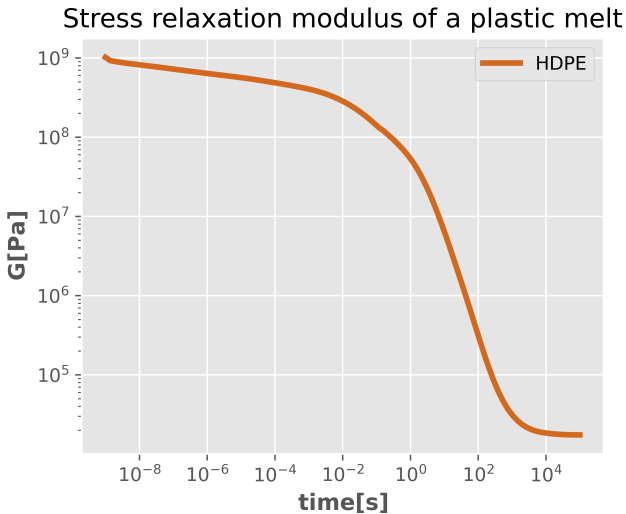
Evaluation of the relaxation of plastic melt

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August 3, 2023

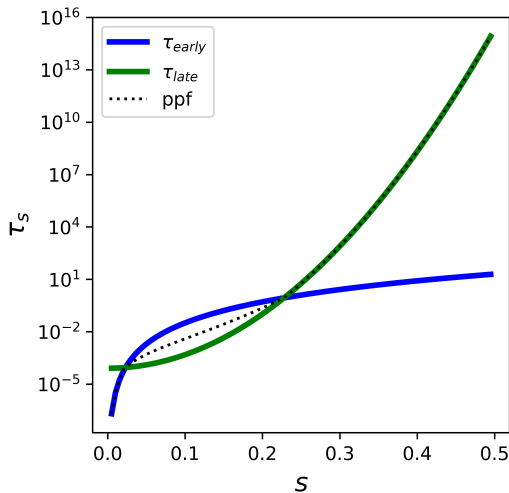
The relaxation of a plastic melt was evaluated by solving a modified version of the diffusion equation. The program is able to estimate the amount of stress relaxation in the plastic melt at any given time.

For the HDPE used in this simulation, the stress relaxation modulus is shown below.



contour length fluctuations

Observing the contour length fluctuation over half the chain's length for a chain of weight 297831 g/mol and comparing it to *Pattamaprom et al.(2000)* as a means of validation.



reference



Pattamaprom, C., Larson, R. G., & Van Dyke, T. J.
Quantitative predictions of linear viscoelastic rheological
properties of entangled polymers.
Rheologica Acta 39 (2000): 517-531..



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