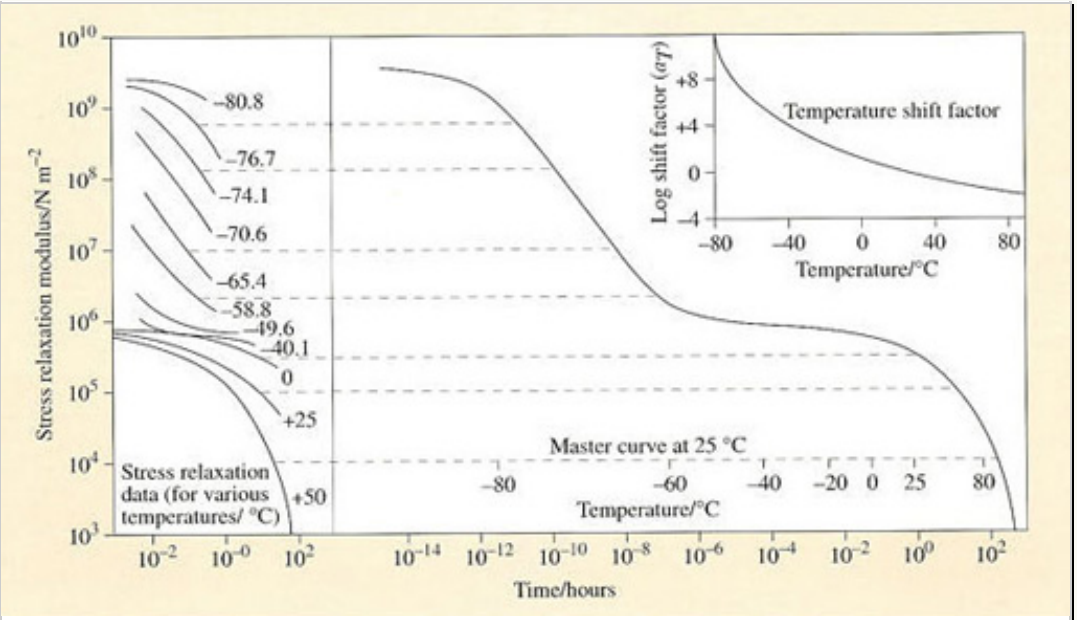
Material Behavior

Topics



Ref:
http://openlearn.open.ac.uk/mod/oucontent/view.php?id=397829§ion=5.3.1

1. Continuity Equation
2. Navier Stokes Equation
3. Thermodynamics
4. Hooke's Law
5. Metal Plasticity
6. Mooney-Rivlin Models
7. Dynamic Material Properties
8. Materials and Tire Behavior

Summary

This section focuses on material behavior and constitutive models that describe it. We cover the Navier-Stokes equations, Hooke's Law, Mooney-Rivlin models for quasistatic behavior of rubber, dynamic material tests and dynamic behavior of rubber, and the time-temperature equivalence of rubber. The next-to-last section addresses certain aspects of tire behavior that is dependent on rubber's dynamic material properties. The final section covers metal plasticity.