**Solution:** The following short solution presents some characteristic results of the Perzyna-type von Mises viscoplasticity model. Therefore, the material parameters are chosen according to Tab. 6.1. The rather odd value of the viscocity stems from the choice of $\tau = \frac{\eta}{2\mu} = 0.5$s.

E in MPa	ν	σ_{y_0} in MPa	H in MPa	h in MPa	η in in MPa s
210000	0.33	200	10000	2000	78947.4

Table 6.1: Material parameters of viscoplastic von Mises material model

(a) –

(b) Running the monotonic uniaxial tensile test in `drive.m` with `ltype=1` and `n_ampl=3` for different axial loading rates leads to the results depicted below.
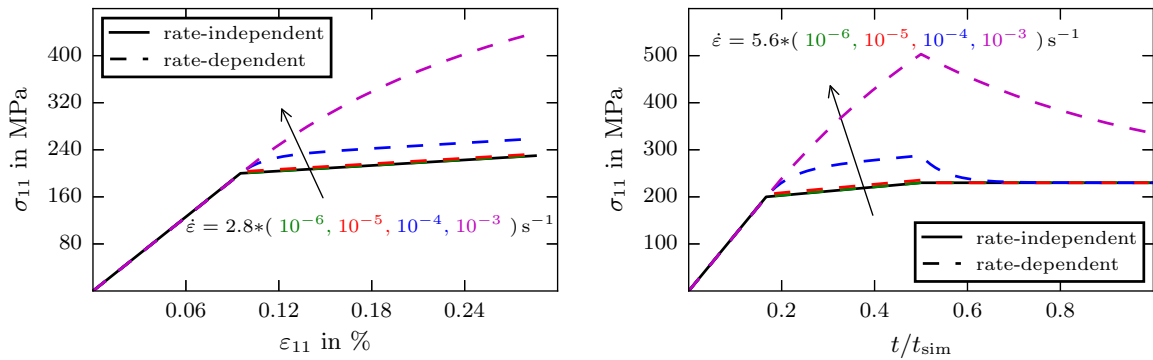
Clearly, the material response is sensitive to the applied loading rate. If the strain is held fixed at the maximum level of axial strain, the rate-dependent Perzyna-type formulation relaxes the stress σ_{11} to that of the rate-independent formulation.