

15.5 We are asked to make schematic strain-time plots for various polystyrene materials and at several temperatures.

(a) Crystalline polystyrene at 70°C behaves in a glassy manner (Figure 15.8, curve *A*); therefore, the strain-time behavior would be as Figure 15.5(b).

(b) Amorphous polystyrene at 180°C behaves as a viscous liquid (Figure 15.8, curve *C*); therefore, the strain-time behavior will be as Figure 15.5(d).

(c) Crosslinked polystyrene at 180°C behaves as a rubbery material (Figure 15.8, curve *B*); therefore, the strain-time behavior will be as Figure 15.5(c).

(d) Amorphous polystyrene at 100°C behaves as a leathery material (Figure 15.7); therefore, the strain-time behavior will be as Figure 15.5(c).