2141341

HW 2

Sketch scanning calorimeter traces upon heating from room temperature for each of the following situations labeling temperatures and exothermic/endothermic directions on each.

a) a 50/50 glassy crystalline polymer, Tg = 50 °C, Tm = 120 °C
b) a blend of two incompatible crystalline polymers with Tm's of 90 °C and 160 °C
c) a 50/50 blend of two compatible glassy polymers with individual Tg's of 110 °C and 200 °C
d) a crystallizeable polymer which has been quenched from above its Tm rapidly enough so that crystalline does not occur upon cooling (Tg = 100 °C, Tm = 250 °C)
e) Polyvinyl chloride (PVC) plasticized 20% with dioctyl phthalate (Tg of pure PVC = 85 °C)