Poly(vinyl chloride) was blended with acrylic rubber over a range of compositions (5-40 wt % of the rubber), using a twin-screw extruder. Morphological properties of the blends were investigated as a function of rubber content and blending temperature, using a scanning electron microscopy. The mechanical properties of the blends were determined by a tensile test. Smooth extrudates were obtained at the blending temperature of 155°C. At a higher blending temperature (195°C), greater die swell ratio and/or melt-fractured extrudates were observed, depending on the rubber content. Miscible blends were obtained at low rubber contents (5-10 wt%). A dispersed particle morphology was observed from the extrudates containing the rubber content of 20-40 wt%, at 195°C. The ultimate tensile stress (UTS) and modulus of the blends decreased with the rubber content. The maximum tensile toughness was obtained for the blend with a rubber content of 20%, at a blending temperature of 155°C.