This effect apparently carries over at temperatures on the order of 40°C greater than the critical temperature since the conductivities of carbon dioxide and ethane both increase rapidly at the critical density at 75°C. The presence of a number of foreign molecules, with different force fields, would tend to decrease the clustering effect because of dilution and interference with colliding molecules. Thus, a mixture of molecules at a temperature not far from the critical temperature and at a pressure not far from that corresponding to that of the critical density of one of the components would have a conductivity somewhat less than that of the component which is near its critical temperature, i.e., the contribution of the clustering effect to the conductivity would be damped to a certain extent. This is the case for the carbon dioxide-nitrogen mixtures and the ethane-nitrogen mixtures. In both of these cases, the conductivity-mole fraction curves are nearly linear at the lowest and the highest pressures, but in the pressure region corresponding to the pressure of the critical density of one of the components, the "extra conductivity" of that component is not felt by the mixture, thus giving a negative deviation from linearity. The situation of ethane-carbon dioxide mixtures, where both components are equally far from their critical temperatures, is clouded, but is an interesting one since both gases have nearly equal thermal conductivities.