Abstract： Piezoelectret film made by cross-linked polypropylene foam sheet was prepared by hot-stretching process.The microstructure of stretched films was observed by SEM technique.The piezoelectric d_{33}-coefficients of the samples,with various degrees of elongation,were determined by a quasi-static method.The applied pressure dependence of piezoelectric d33-coefficients was investigated.The influence of surface structure on piezoelectric activity was discussed also.The results show that the piezoelectricity begins at the degree of elongation 70%.The piezoelectric d_{33}-coefficients are enhanced with the increases of elongation degree.The d_{33} value of 35 pC/N is obtained for the sample stretched to elongation degree of 150%.All the samples show good linearity in the range of applied pressure up to 30 kPa.Improved piezoelectric activity is obtained for the stretched XPP films when the rough surfaces were exposed to corona