

Polar solvents are good for the swelling of polar polymers, nonpolar solvents are good for the swelling of nonpolar polymers. According to the Lewis theory of acids and bases, hard acids contain electronegative atoms of a small radius and low polarizability that prone to gain lone electron pairs, while hard bases are also made of electronegative atoms with low polarizability that prone to donate lone pairs of electrons. Overall, acids are acceptors of lone electron pairs (they must have empty orbitals), while bases are donors of lone electron pairs. e arrange cations and anions in the order of the increase of their). Figure Lyotropic series of ions: the intense of the concurrence with proteins for water molecules is decreasing from left to right The influence of pH in water solution on the swelling degree is represented in figure The swelling degree has the lowest value at the certain pH. At this pH a given protein has no overall charge: the total positive charge existing in some regions of a protein is equal to the total negative charge existing in other regions of the same protein. From the point of view of thermodynamics, the enthalpy of solvation and the enthalpy of the formation of bonds between different chains of a polymer determine the heat effect of the whole process. Viscosity.2