

Calcium lignosulfonate is extracted from the wood and straw pulp after sulfite pulping processed by advanced production technology have made of brown powdery solid, highly soluble in water. It is a polymer electrolyte having a molecular weight from the 1,000-100000. 10000-40000 dispersion which is particularly effective, common of lignin sulfonate, which has branched and cross-linked molecular structure.

Calcium lignosulfonate with a strong decomposition, bonding, chelation.

As mentioned above the molecular weight of calcium lignosulfonate different, with different degrees of dispersion, water-soluble calcium lignosulfonate lyophilic colloidal properties, with a charge on the particle, is a surface active substance can be adsorbed on on the surface of various solid particles, but also because it is a salt of the strong acid, ion exchange can be performed, because addition of the organizational structure of lignosulfonate there exists a variety of reactive groups, will produce a better internal The polymerization or condensation occurs with other compounds.

Based [calcium lignosulfonate](#) having the above various properties, it can be used as concrete superplasticizer. Cement slurry thinners, sand reinforcement, pesticide emulsifier, dispersant dressing, leather pre-tanning agent, ceramic or refractory plasticizer, an oil or dam grouting gel and so on.

Currently calcium lignosulfonate in our building, hydropower, metallurgy, petroleum, mining, ceramics and other industries, has been widely used.

Calcium lignin sulfonate superplasticizer in the concrete product' s main application.

[Calcium lignosulfonate](#) water reduction in concrete reinforced mechanism of calcium lignin sulfonate and lignin sulfonate superplasticizer is a surface-active agent, added to the concrete, due to the orientation of hydrophobic groups adsorbed on cement particle surface, so that a negative charge of cement. Cement particles have the same charge in the charge repulsion exclusion from each other under the action of dispersion of cement in water the initially-formed into a dispersion structure floc structure, flocculation cohesion body of free water is released, so as to achieve the

purpose of reducing agent. Observations show that adding calcium wood concrete after mixing for 5 minutes more than 80% of the reducing agent is adsorbed, clearly visible under the electron microscope, the center point of significantly increased hydration, hydration evenly distributed, hydrated crystal fibers longer various microscopic characteristics.

Thus, the adding of [calcium lignosulfonate](#), free water evaporates leaving the pores is small, dense internal structure, that is, reduction of the porosity is clearly beneficial to increase the strength of concrete, cement improves the size and distribution of the pore structure conditions, the crystal growth rate slow, crystal growth more fully, and thus get more fibrous crystals interspersed with each other to form a strong network structure, so that the concrete strength significantly increased. Thus, in concrete mixed with wood calcium superplasticizer, concrete mixture can reduce water consumption and reduce water-cement ratio, improved workability, is conducive to pumping, improve concrete strength, density and durability.