Deosen DSTA gum (Water retaining agent)

Deosen Biochemical Co., Ltd. and China Building Materials Research Institute jointly developed "Deosen DSTA gum". DSTA gum is a new type of microbial polysaccharide with outstanding viscosity regulation properties, outstanding pseudoplasticity, good compatibility with salts, excellent freeze-thaw stability, excellent emulsification performance and solid suspension ability. It is a biological fermentation preparation which is green and a new environmentally friendly industrial additive.

Viscosity adjustment and water retaining agent in concrete
After adding Deosen DSTA gum to the concrete, the unique network structure of DSTA gum produces a great adsorption effect on water molecules and a lubrication effect on large solid particles. It will make the concrete mortar has good wrapping performance on the stones, the workability will be improved significantly, and the slurry spreads evenly, which can effectively avoid the segregation and early hardening of the mortar after the concrete is mixed due to the regional difference of sand/stone particle size. After 1 hour, it will have small loss of expansion and slump degree, and the pumpability remains good. It will not affect the strength, fluidity, stability and air contents of the concrete.

Without adding DSTA gum	After adding DSTA gum
Serious segregation of concrete	Concrete spreads evenly
	

Drilling mud viscosity adjustment
DSTA gum has a large number of hydrophilic groups, which can be adsorbed on clay particles. It can form a network structure and interact with water to form an adsorption hydration film which increases the viscosity of the mud by its long molecular chains. DSTA gum will increase the shear force and reduce hole wall filtration, strong suspension ability can effectively ensure that the mud has enough capacity to carry sands and cuttings, and ensure that the hole wall will be safely drilled, and prevents hole wall collapse.

Paint water-based tackifier
DSTA gus obviously improves the stability of the paint, prevents the pigments and fillers from sinking and agglomerating. It can avoid the undesirable effects

of paint layering after opening the package. The excellent pseudoplasticity of DSTA gum saves manpower and reduces labor intensity due to the decrease in viscosity when the coating is rolled and brushed at a high shear rate. After brushing, the shearing force is eliminated and the original viscosity is restored, so that the thick film does not sag, there will no drips or splashes during brushing and roll coating. At the same time, the excellent water retention effect delays the film loss rate and it will make the brush surface larger. Adding DSTA gum to the paint can greatly improve the workability, the leveling and the storage stability of the product.