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Hydroxyethyl Cellulose(HEC)

CAS NO.:9004-62-0
Other names: Cellulose, hydroxyethyl ether; Hydroxyethylcellulose; 2-Hydroxyethyl cellulose; Hyetellose;

Hydroxyethyl cellulose (HEC) is a white or light yellow, odorless, non-toxic fibrous or powdered solid, prepared by etherification of alkaline cellulose and ethylene oxide (or chloroethanol). Non-ionic soluble cellulose ethers. Because HEC has good characteristics of thickening, suspending, dispersing, emulsifying, bonding, filming, protecting moisture and providing protective colloid, it has been widely used in petroleum exploration, coatings, construction, medicine and textiles, papermaking, and macromolecules. Polymerization and other fields. 40 mesh sieving rate ≥99%;

Hydroxyethyl Cellulose ,is used as thickener, defensive colloid, normal water preservation agent and rheology modifier in different software like water-based paints, building components, essential oil discipline chemical compounds and private care products.It has good thickening, suspending, dispersing, emulsifying, film-forming, water-protecting and providing protective colloid properties.

1.Chemcial Specification

Appearance	White to off-white powder
Particle size	98% pass 100 mesh
Molar substituting on degree (MS)	1.8~2.5
Residue on ignition (%)	≤0.5
pH value	5.0~8.0
Moisture (%)	≤5.0

2.Products Grades

HEC grade	Viscosity (NDJ, mPa.s, 2%)	Viscosity (Brookfield, mPa.s, 1%)	Data Download
HEC HS300	240-360	240-360	Click Here

HEC HS6000	4800-7200		Click Here
HEC HS30000	24000-36000	1500-2500	Click Here
HEC HS60000	48000-72000	2400-3600	Click Here
HEC HS100000	80000-120000	4000-6000	Click Here
HEC HS150000	120000-180000	7000min	Click Here

3. Performance Characteristics

1). HEC is soluble in hot or cold water, does not precipitate at high temperature or boiling, so that it has a wide range of solubility and viscosity characteristics, and non-thermal gelation;

2). It is non-ionic and can coexist with a wide range of other water-soluble polymers, surfactants, and salts. It is an excellent colloidal thickener containing high-concentration dielectric solutions;

3). The water retention capacity is twice as high as that of methyl cellulose, and it has better flow regulation;

4). Compared with the recognized methyl cellulose and hydroxypropyl methyl cellulose, the dispersing ability of HEC is the worst, but the protective colloid ability is the strongest..

4. Hydroxyethyl Cellulose (HEC) Applications:

Application field

Used as adhesive, surface active agent, colloidal protective agent, dispersant, emulsifier and dispersion stabilizer, etc. It has a wide range of applications in the fields of coatings, inks, fibers, dyeing, papermaking, cosmetics, pesticides, mineral processing, oil extraction and medicine.

1. Generally used as thickeners, protective agents, adhesives, stabilizers and additives for the preparation of emulsions, gels, ointments, lotions, eye clearing agents, suppositories and tablets, and also used as hydrophilic gels and skeletons Materials, preparation of matrix-type sustained-release preparations, and can also be used as stabilizers in food.

2. HEC is used as sizing agent in textile industry, bonding, thickening, emulsifying, stabilizing and other additives in electronics and light industry.

3.HEC is used as a thickener and fluid loss reducer for water-based drilling fluids and completion fluids. The thickening effect is obvious in brine drilling fluids. It can also be used as a fluid loss control agent for oil well cement. It can be cross-linked with multivalent metal ions to form a gel.

4.HEC product is used for fracturing petroleum water-based gel fracturing fluid, polystyrene and polyvinyl chloride and other polymeric dispersants. It can also be used as a latex thickener in the paint industry, a humidity-sensitive resistor in the electronics industry, a cement anticoagulant and a moisture retention agent in the construction industry. Ceramic industry glaze and toothpaste adhesive. It is also widely used in printing and dyeing, textile, papermaking, medicine, hygiene, food, cigarettes, pesticides and fire extinguishing agents.

5.HEC is used as surface active agent, colloidal protective agent, emulsion stabilizer for vinyl

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chloride, vinyl acetate and other emulsions, as well as latex thickener, dispersant, dispersion stabilizer, etc. It is widely used in coatings, fibers, dyeing, papermaking, cosmetics, medicine, pesticides, etc. It also has many uses in oil exploration and machinery industry.

6. Hydroxyethyl cellulose has surface activity, thickening, suspension, adhesion, emulsification, film formation, dispersion, water retention and protection in solid and liquid pharmaceutical preparations.

7. HEC is used as a polymer dispersant for the exploitation of petroleum water-based gel fracturing fluid, polyvinyl chloride and polystyrene. It can also be used as a latex thickener in the paint industry, a cement retarder and moisture retention agent in the construction industry, a glazing agent and toothpaste adhesive in the ceramic industry. It is also widely used in industrial fields such as printing and dyeing, textile, papermaking, medicine, hygiene, food, cigarettes and pesticides.

Packaging: 25kg paper bags inner with PE bags.
20’FCL load 12ton with pallet
40’FCL load 24ton with pallet