

Thickener products

The thickener products of our company include emulsion and instant-dissolving powder products. The emulsion product is a water-in-oil emulsion product. During the production of the powder product, appropriate amounts of pore-forming agents, surfactants and other additives are added, which significantly improves the solubility of the product. In terms of product performance, these products can be classified into conventional thickeners, salt-resistant thickeners and acidizing thickeners.

Thickener	Indicator	Application
Appearance	White emulsion	The product has excellent properties such as high viscosity, shear resistance and easy flow back.
pH	6 ~ 8	
Emulsion stability (°C)	≤-15	
Apparent viscosity (1.0%, 25°C), mPa·s	≥80	
Swelling time, s	≤30	
Temperature and shear resistance (1.0%, 100°C, 60min), mPa·s	≥50	
Gel-breaking time (90°C, 0.02% APS), h	≤2	
Kinematic viscosity of gel-broken fluid (25°C), mm²/s	≤5	
Surface tension of gel - broken fluid (25°C), mN/m	≤28	
Interfacial tension of gel - broken fluid (25°C), mN/m	≤2	

Salt resistance thickener	Indicator	Application
Appearance	White emulsion	The JF series of salt resistant thickeners incorporate sulfonic acid groups that are insensitive to salt and high temperatures, along with groups featuring hydrophobic functions. This enables the viscosity retention rate in high - salinity brine and wastewater to be ≥ 70%, thus effectively resolving the predicament where conventional products almost lose their viscosity in such media. Moreover, this thickener is easy to prepare and ensures safe and reliable construction.
pH	6 ~ 8	
Emulsion stability (C°)	≤ -15	
Swelling time, s	≤60	
Temperature and shear resistance (30,000 ppm standard salt water, 1.5%, 100°C, 60 min), mPa·s	≥70	
Gel-breaking time (90°C, 0.02% APS), h	≤2	
Kinematic viscosity of gel-broken fluid (25°C), mm²/s	≤5	
Surface tension of gel - broken fluid (25°C), mN/m	≤28	
Interfacial tension of gel - broken fluid (25°C), mN/m	≤2	

Acidifying thickener	Indicator	Application
Viscosity (30°C, 170s-1, mPa·s)	≥300	The usage concentration is low and it is easy to prepare on site. It can achieve a good thickening effect even with a small dosage. It is salt - resistant and high - temperature - resistant. Since this product is a cationic polymer, it can prevent clay swelling and particle migration. It has good fluid - discharging performance. It has excellent compatibility with other additives used in acid solutions, such as corrosion inhibitors, iron - ion stabilizers, and flow - back aids. It can effectively reduce the acid - rock reaction rate and the acid - fluid filtration rate, and expand the treatment radius of the acid fluid.
Stability	No obvious stratification	
Acid liquid viscosity (1.0%, 30°C, 170s ⁻¹ , mPa·s)	≥30	
Temperature resistance performance (170s ⁻¹), °C	≥120	
Acid liquid viscosity reduction rate (%)	≤30	
Acid dispersibility	Dispersed in a 20% hydrochloric acid solution within 2 hours completely	
Fluidity	Good fluidity and there is no caking or other such phenomena.	
Shear stability (90°C) mPa·s	≥ 25	

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