

G-4

Polymer Particles for Water Conformance



Product Description

G-4 is the polymer expandable emulsion particles developed by CNPC USA. It is specially designed for oil fields that have undergone long-term water flooding to increase production. It could be used for deep profile control and water plugging of water injection wells in areas with high water production ratio and low oil displacement efficiency. It has the characteristics of low initial viscosity of the solution, good injectability, controllable expansion ratio and time, and good blocking stability.

Advantages

- In liquid form that can be added in-situ
- Dosage: 0.5-1.5 %
- Particle initial diameter D50: 5-15 μm
- Particles dispersion initial viscosity: 3-5 cp
- Particle expansion time: 5-60 days
- Particle size expansion: 3-20 times
- Application temperature: 40-90 $^{\circ}\text{C}$

Applications/Recommended Treatment

G-4 polymer expandable emulsion particles plugging agent could be easily dispersed into the injection water during water flooding at a product concentration of 0.5-1.5 % (particle concentration of 1500-5000 ppm) based on reservoir conditions and injection design.



Typical Properties

- Appearance: off-white opaque liquid
- Polymer activity: 30 %
- Specific Density, 1.02-1.06 g/cm^3
- Product viscosity, 400-2000 cp
- Flash Point, > 210 $^{\circ}\text{F}/100^{\circ}\text{C}$
- Pour Point, < 0 $^{\circ}\text{F}/-18^{\circ}\text{C}$
- Dispersible in water

Packaging and Storage

- 265 Gal (900 Kg) totes (IBCs) or 55 Gal (180 Kg) drums
- Keep in the original container if it is not used all. Store the product in the containers with closed lids in a dry, cool and well-ventilated place.