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Oilfield Chemical Additives Supplier for

- Drilling
- Completion
- Production
- Stimulation

Thickeners for Acid Fracturing

UZP-160A

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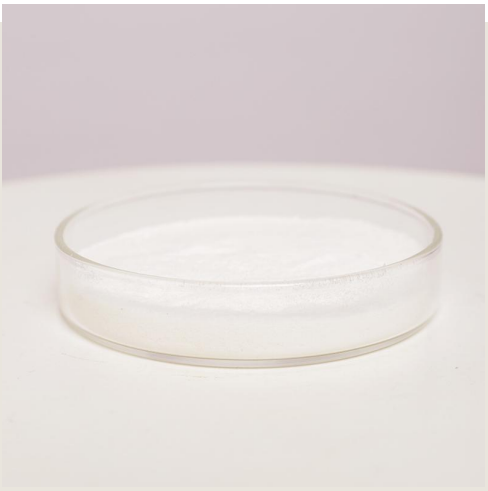

UZP-160A is designed for oilfield fracturing operation, is used in conjunction with crosslinking agent UZP-160B to form a novel clean fracturing fluid system.

Hydraulic fracturing, also known as fracking, is a well stimulation technique used to extract natural gas and oil from deep underground rock formations. This process involves injecting a high-pressure fluid mixture into a wellbore to create fractures in the rock, allowing the hydrocarbons to flow more freely and be extracted to the surface. The fluid used in hydraulic fracturing, known as fracturing fluid, typically consists of water, proppants (such as sand or ceramic beads), and various chemical additives, including crosslinking agents like zirconium-based compounds.

Technical Index

Appearance	White powder
Φ0.425 mm (40 mesh) sieving residue, ≤%	10
Moisture, ≤%	10
pH	6-8
Viscosity@ 0.4%,25℃,170s-1, ≥mPa.s	28
Salt resistance (0.4%UZP-160A+10% standard brine*), ≥mPa.s	20
Salt resistance (0.4%UZP-160A+5% standard brine*), ≥mPa.s	25
Crosslinking property (used in combination with UZP-160B)	Form suspensible gel
Relative drag reduction (0.12%UZP-160A, flow rate 8m/s, compare to water), ≥%	65
Rheological property 0.4%solution,120℃,170s-1,120min, ≥mPa.s	80
*Standard brine: 2.0%KCl+5.5%NaCl+0.45%MgCl2+0.55%CaCl2 *UZP-160B is crosslinking agent	

Product introduction

The system has super temperature and salt resistance, suitable for the conventional fracturing operation of oil and gas wells between 60℃ and 160℃, especially has remarkable effects on the wells beyond 120℃. This system can be used with on-site flowback water, and the effect will be not affected. UZP-160A also can be used as drag reducer.

Zirconium-based crosslinking agents, or zirconium crosslinkers, play a crucial role in the hydraulic fracturing process by enhancing the performance of the fracturing fluid. These compounds are designed to increase the viscosity and stability of the fracturing fluid, thereby improving its ability to carry proppants into the created fractures and maintain the integrity of the fracture network. Zirconium crosslinkers achieve this through a process known as crosslinking, where they form strong, three-dimensional networks within the fluid, effectively thickening it and enhancing its proppant-carrying capacity.

One of the key advantages of zirconium-based crosslinking agents is their exceptional thermal stability, making them well-suited for use in high-temperature downhole environments commonly encountered in oil and gas reservoirs. Their ability to maintain stability and viscosity under elevated temperatures ensures the effectiveness of the fracturing fluid in challenging downhole conditions, contributing to successful well stimulation and enhanced hydrocarbon recovery.

Furthermore, zirconium crosslinkers offer environmental benefits compared to some traditional metal-based crosslinking agents. Their environmentally friendly profile, coupled with their high-performance characteristics, makes them a preferred choice for hydraulic fracturing operations, aligning with the industry's increasing focus on sustainable and responsible practices.

In summary, zirconium-based crosslinking agents are integral to the success of hydraulic fracturing operations, contributing to the efficient extraction of natural gas and oil from subsurface formations. Their ability to enhance the performance and stability of fracturing fluids, coupled with their thermal resilience and environmental compatibility, positions them as essential components in the modern oil and gas production landscape. As the industry continues to evolve, zirconium crosslinkers are expected to play a pivotal role in optimizing hydraulic fracturing processes and supporting sustainable energy development.

Application

1.The dosage of UZP-160A is measured according to the concentration of the mixture, stir in the agitator for 300-400r/min, it will take 30 minuts from dissolve thoroughly to form a uniform solution, and the base fluid viscosity getting stable.
2.The crosslinking time can be adjusted, and the adjustment range is 0 ~ 2 minutes.
3.The breaking time of the system can be adjusted according to the actual situation (the minimum dosage of the breaking agent is 0.05%)

Recommended Handling

All personnel handling this material must handle it as an industrial chemical, wearing protective equipment and observing the precautions as described in the Material Safety Data Sheet.

Packaging and Storage

UZP-160A is packed in 25kg woven bag or kraft paper barrel.
UZP-160B is packed in 200L plastic drum.
Store in dry, well-ventilated area. Keep container closed. Keep away from heat, sparks and flames. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and /or stacking. Shelf life is 12 months.

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Youzhu Chem offers a wide range of oil field chemicals widely used in the various stages of oil and gas production. And we have developed the finest quality Oil Soluble Demulsifier, Water Soluble Demulsifier and Corrosion Inhibitors. Our products enable customers to maximize value in their oilfield operations, and increase the overall efficiency of the well.