

ReLease Performance Stimulation Fluid Systems

For fresh water

KEANE



ReLease™ performance stimulation fluid systems are designed to help operators increase production and improve ROI with best-in-class friction reducers and crosslinked gel systems. We have solutions for pumping slickwater, linear gel, and both borate- and zirconium-crosslinked gels.

Testing is conducted on source water and formation samples prior to the field application of ReLease fluid systems to ensure proper fluid characteristics for the well environment.

Our custom chemistry is developed at the Keane Engineering & Technology Center in The Woodlands, Texas, by a staff of specialists with decades of combined industry experience.

Our network of labs extends this expertise to the heart of every major basin to address local formation challenges before operations begin.



ReRelease Speed Slickwater Fluid Systems

ReRelease Speed™ is a full line of slickwater systems with friction reducers (FR). To enhance operational performance, ReRelease Speed is customized for reservoir conditions using either a cationic or anionic FR for fresh water, including low-salinity brine applications. The Engineering & Technology Center team recommends the addition of clay stabilizers in the Permian, Eagle Ford, Mid-Con, and Marcellus when the salinity of the source water is less than 30,000 mg/L. In these applications, testing should be conducted on all water sources.

Fluid System	Breakers	Polymer	Optimal Performance
ReRelease Speed	<ul style="list-style-type: none">• KGBO-1• KWBO-2• KWBO-11	Anionic/cationic polyacrylamide (FR)	<ul style="list-style-type: none">• Water hardness up to 2,500 mg/L• TDS up to 30,000 mg/L• pH >4.5 when using anionic FR• No pH limits when using cationic FR

ReLease Dry Slickwater Fluid Systems

ReLease Dry™ offers a cost-effective, dry FR alternative to emulsion systems. Similarly to ReLease ReUse Speed, this dry product provides state-of-the-art, proprietary FRs for effective application in all major shale formations.

Fluid System	Breakers	Polymer	Optimal Performance
ReLease Dry	<ul style="list-style-type: none">• KGBO-1• KWBO-2• KWBO-11	Anionic/cationic polyacrylamide (FR)	<ul style="list-style-type: none">• Water hardness up to 2,500 mg/L• TDS up to 30,000 mg/L• pH >4.5 when using anionic FR• No pH limits when using cationic FR

ReRelease Linear Fluid Systems

ReRelease Linear™ fluid systems are natural or modified-natural polymers used without crosslinkers. Our custom designs take the unique environment of each well into consideration to ensure reservoir compatibility for maximum production. ReRelease Linear provides an economic fluid option without compromising viscosity characteristics. The gelling agents used are available in dry or slurry form. Polymers used include guar (G), carboxymethyl cellulose (CMC) or cellulose gum, and carboxymethyl hydroxypropyl guar (CMHPG).

Fluid System	Polymer Product	Polymer Type	Breakers	Optimal Performance
ReRelease Linear-CMC	KWG-7 L or D	CMC	KWBO-2	<ul style="list-style-type: none">• Water hardness <2,500 mg/L• pH 6.5–8.5
ReRelease Linear-G	KWG-111 L or D	Guar	KWBO-2	Any water condition within a pH range of 6.5–8.5
ReRelease Linear-CMH	KWG-33 L or D	CMHPG	KWBO-2	Any water condition



10LB

Fisherbrand
500mL

FB-501-500
STOPPER NO. 10

20LB

Fisherbrand
500mL

FB-501-500
STOPPER NO. 10

25LB

Fisherbrand
500mL

FB-501-500
STOPPER NO. 10



Release Ultra Viscosifying-FR Fluid Systems

ReLease Ultra™ viscosifying-FR fluid systems are a simple alternative to traditional hybrid fluid designs. Typically, a hybrid system requires a pump schedule that alternates slickwater, linear, and crosslinked fluids. ReLease Ultra is the next-generation fluid system—without the need for multiple pump schedules.

ReRelease Ultra is pumped on the fly and can be controlled to increase or decrease viscosity on demand. This not only simplifies operational procedures but also reduces equipment on site by eliminating the need for a hydration unit.

This viscosifying-FR system does not require heating during cold weather conditions. The solution can incorporate clay stabilizer, bactericide, and surfactant in a mixture designed specifically to meet reservoir conditions.

**ReRelease Ultra
can simply be
dialed up or
down to modify
viscosity on
demand.**

Fluid System	Polymer	Breakers	Optimal Performance	Target Basins
ReRelease Ultra	Anionic/cationic polyacrylamide-polysaccharide	KGBO-1 KWBO-2	<ul style="list-style-type: none">• Sulfates <150 mg/L• TDS <5,000 mg/L• Temperatures >32°F• pH >4.5• Water hardness <1,000 mg/L	<ul style="list-style-type: none">• Bakken• West Texas• South Texas (Eagle Ford, Pearsall)• Mid-Con (SCOOP, STACK)

ReLease XB Crosslinked Borate Fluid System

ReLease XB™ guar-crosslinked borate fluid systems provide a variety of solutions for achieving effective stimulation with different polymer loadings. ReLease XB performs reliably in temperatures up to 320°F, making it a suitable candidate for every major basin of the US. These flexible systems enable highest proppant transport for increased reservoir contact. Proper breaking of ReLease XB translates to maximum regained conductivity and permeability. This system is pumped at a lower rate and is ideal for large casing or shallow wells.

Optional additives include scale inhibitor, clay control, surfactants, bactericide, and other chemicals as required for well conditions.

ReLease XB-HT

This high-rate, high-temperature system incorporates a delayed crosslinker, which is ideal for long laterals and small casing.

ReLease XB-LT

This low-polymer fluid system is best suited for low-temperature or shallow wells. It is also ideal for high-conductivity, low-permeability reservoirs and is a step up from a slickwater fluid system.

Fluid System	Guar Crosslinker	Buffer/pH Additive	Breakers	Optimal Performance	Target Basins
ReRelease XB	Instant crosslinker: <ul style="list-style-type: none"> • KWXB-14 • KWXB-20 	KPH-14L	<ul style="list-style-type: none"> • KWBO-2 • KWBO-13 	<ul style="list-style-type: none"> • Water hardness <2,500 mg/L • Temperatures up to 240°F 	Bakken, West Texas, South Texas (Pearsall), Marcellus and Utica (when crosslinked system required)
ReRelease XB-HT	Delayed crosslinker: <ul style="list-style-type: none"> • KWXB-19 • KWXB-22 • KWXB-15C 	<ul style="list-style-type: none"> • KPH-14L • KPH-16L 	<ul style="list-style-type: none"> • KWBO-13 • KWBO-8 	<ul style="list-style-type: none"> • Water hardness <2,500 mg/L • Temperatures up to 320°F 	South Texas (Eagle Ford), Eaglebine, Woodbine, Mid-Con (SCOOP, STACK), Bakken (lower shale)
ReRelease XB-LT	All above with polymer loading range of 8–12#	<ul style="list-style-type: none"> • KPH-14L • KPH-15L • KPH-2 • KPH-4 	<ul style="list-style-type: none"> • KWBO-2 • Encap-LP • KWBO-13 	<ul style="list-style-type: none"> • Water hardness <2,500 mg/L • Temperatures 100–180°F 	West Texas, Mid-Con (SCOOP, STACK)

ReLease XZ Crosslinked Zirconium Fluid System

ReLease XZ™ crosslinked zirconium fluid systems are an alternative to guar-based fluids and ideal for tight sands in gas reservoirs or where carbon dioxide is present. ReLease XZ has the best viscosity performance in proppant-carrying capabilities and crosslinking control in freshwater and low-salinity environments.

ReLease XZ-Clean

This is a low-pH system—one of the cleanest crosslink systems on the market for improved permeability in the proppant pack. The system uses a carboxymethyl cellulose (CMC) polymer.

ReLease XZ-HT

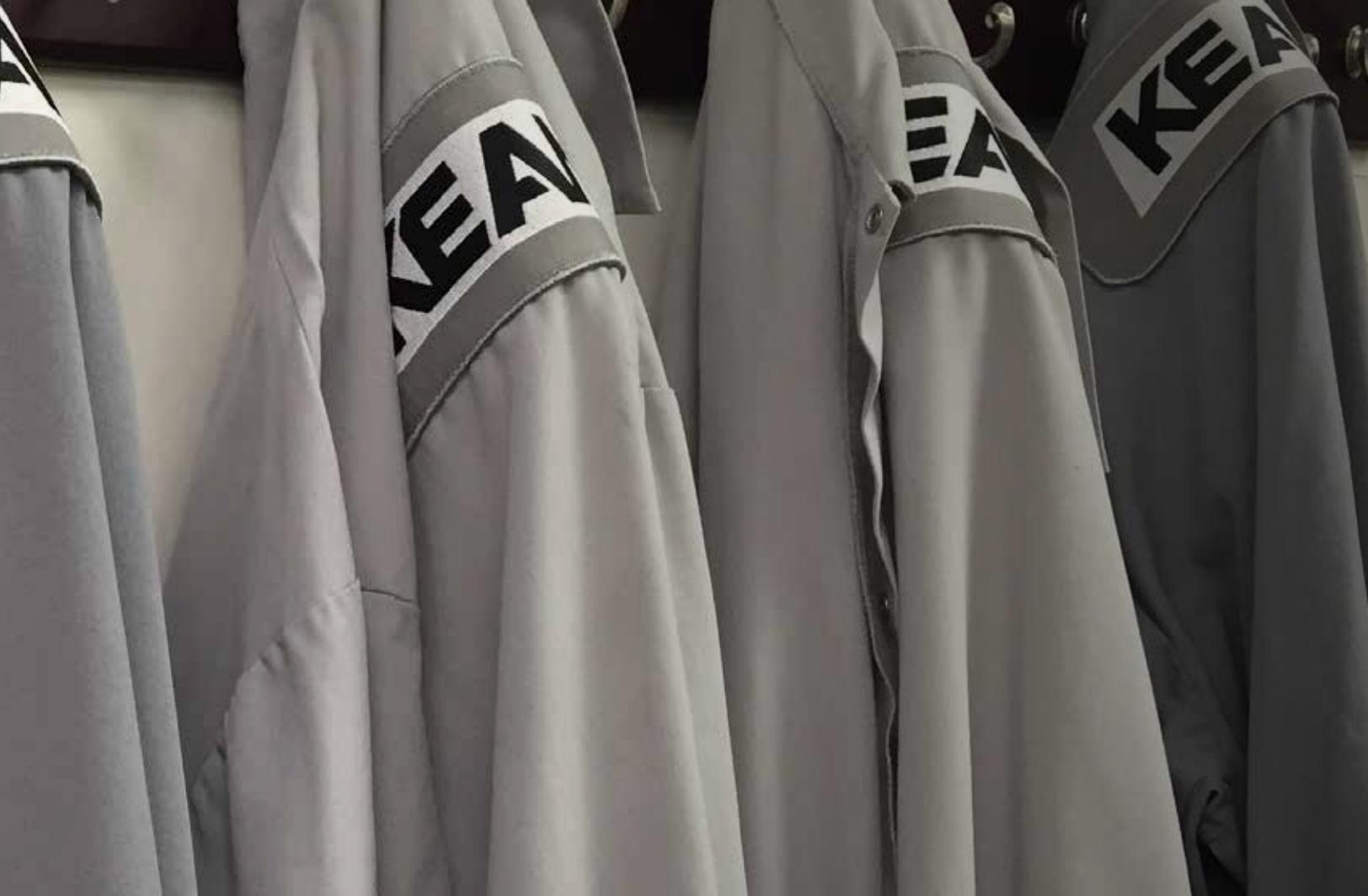
This crosslinked system uses a carboxymethyl hydroxypropyl guar (CMHPG) polymer. It is exceptionally stable in high-temperature reservoirs up to 375°F.

Fluid System	Fluid pH	Polymer Crosslinker	Buffer	Breakers	Optimal Performance	Target Basin
ReRelease XZ-Clean	Low pH	<ul style="list-style-type: none"> • KWXZ-4 • KWXZ-5 • KWXZ-6 	<ul style="list-style-type: none"> • KPH-2 • KPH-4 	<ul style="list-style-type: none"> • KWBO-2 • KWBO-13 	<ul style="list-style-type: none"> • Water hardness <2,500 mg/L • Temperatures up to 260°F 	<ul style="list-style-type: none"> • South Texas (Pearsall) • Rockies
ReRelease XZ-HT	High pH	<ul style="list-style-type: none"> • KWXZ-4 • KWXZ-5 • KWXZ-6 	<ul style="list-style-type: none"> • KPH-14L • KPH-15 • KPH-16 	<ul style="list-style-type: none"> • KWBO-8 	<ul style="list-style-type: none"> • Water hardness <2,500 mg/L • Sulphates <1,000 mg/L • Temperatures up to 375°F 	<ul style="list-style-type: none"> • HT basins • Eagle Ford dry gas



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Performance Stimulation Fluid Systems for Fresh Water



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