



PETROSTEP[®] NE SERIES

NON-EMULSIFIERS FOR HYDRAULIC FRACTURING

Emulsions between hydrocarbons and brines can form downhole, in the fractures and matrix rock, as well as in flowlines. Emulsions cause blockages in the hydrocarbon flow path and can slow down production. In addition, they can increase the cost of separation.

A non-emulsifier added to the fracturing or workover fluid can help prevent emulsions from forming. It ensures that the wells can operate at their optimum performance.

The PETROSTEP® NE non-emulsifiers are unique surfactant blends, soluble in alcohol and aromatic solvents, and dispersible in both water and hydrocarbon fluids. They are easily formulated and compatible with most fracturing or workover fluids for a variety of applications. In this photo, you can see how effectively PETROSTEP NE separates the emulsion.



Oil Phase: West Texas condensate, API gravity* ~55
Aqueous phase: 1 gpt broken polyacrylamide solution**

APPLICATION AND TYPICAL PROPERTIES	PETROSTEP NE-3	PETROSTEP NE-4
Application Crude Type	Condensate to light crude	Light crude
Actives %	>90%	80%
Appearance at 25°C	Clear, viscous liquid	Pale straw liquid
Surfactant type	Nonionic	Cationic
Solubility in water	Soluble	Soluble
Solubility in alcohols	Soluble	Soluble
Solubility in aromatics	Dispersable	Dispersable
Treating rate <i>based on actives</i>	0.2 – 1.0 gpt (200 – 1,000 ppm)	0.2 – 1.0 gpt (200 – 1,000 ppm)

To learn more about our PETROSTEP NE line of products, email oilfield@stepan.com or call 713.955.8100.

BRINGING VALUE TO THE SURFACE®

*API gravity = American Petroleum Institute gravity

**Solution was prepared by hydrating 1 gpt of a common anionic polyacrylamide emulsion in 2% KCl, 0.5 gpt of ammonium persulfate was used as the breaker. The solution with breaker was placed into a waterbath at 70°C for 2 hours. The viscosity of the broken polymer solution is <1 cP at 100/s at 25°C.