

Aromatic solvents are commonly used to clean pipes, wellbores and other equipment, and are often emulsified into aqueous systems. Stepan Oilfield Solutions' PETROSTEP ND-1 is a nonionic surfactant blend that can emulsify these compounds as macroemulsions for oilfield cleaning applications.

Emulsion formulations with PETROSTEP ND-1 can be further stabilized with the addition of a co-solvent to create microemulsions for use in flowback additives and corrosion inhibitors. PETROSTEP ND-1 is effective in both acids and brines.

MACROEMULSIONS



Oil-in-water (o/w)
43.5% Toluene
43.5% 15% Hydrochloric acid (HCl)
13% PETROSTEP ND-1
Stable for at least 24 hours at room temperature



Oil-in-water (o/w)
43.5% d-limonene
43.5% 15% HCl
13% PETROSTEP ND-1
Stable for at least 24 hours at room temperature

MICROEMULSIONS



Oil-in-water (o/w)
33% Xylene
33% 2% Potassium chloride
13% PETROSTEP ND-1
20% Isopropanol
Stable over time and difficult to break.

PRODUCT PROPERTIES AND APPLICATION RECOMMENDATIONS

TYPICAL PROPERTIES

- Appearance at 25°C: Clear to hazy liquid
- Actives, %: 99 min.
- pH (5% aqueous): 5.0 9.0
- Density at 25°C, g/mL: 0.99
- Flash Point (PMCC): >94°C
- Pour Point: 3°C
- Freeze Point: 0°C
- Color, Gardner: 7 max.
- Viscosity at 25°C cps: 1325
- Viscosity at 40°C cps: 420
- Viscosity at 60°C cps: 135

APPLICATIONS

Emulsifier for aromatic solvents

- Wellbore cleaning
- Pipe cleaning
- Flowback additives

Dispersant for aromatic compounds

Corrosion inhibitor actives

DIRECTIONS FOR USE

- As an emulsifier or dispersant alone
- Add a co-solvent to further stabilize formulation

For more information about PETROSTEP ND-1 and other PETROSTEP products, email oilfield@stepan.com or call 713.955.8100.

PETROSTEP IS A REGISTERED TRADEMARK OF STEPAN COMPANY. The information contained herein is based on the manufacturer's own study and the works of others and is subject to change without prior notice. The information is not intended to be all-inclusive, including as to the manner and conditions of use, handling, storage or disposal or other factors that may involve additional legal, environmental, safety or performance considerations. Nothing contained herein grants or extends a license, express or implied, in connection with any patents issued or pending of the manufacturer or others, or shall be construed as a recommendation to infringe any patents. STEPAN COMPANY MAKES NO PRODUCT WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR USE, EXPRESS OR IMPLIED, AND NO OTHER WARRANTY OR GUARANTY, EXPRESS OR IMPLIED, IS MADE, INCLUDING AS TO INFORMATION REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY, ACCURACY, COMPLETENESS, OR ADEQUACY. Stepan Company (and its employees, subsidiaries and affiliates) shall not be liable (regardless of fault) to the vendee, its employees, or any other party for any direct, indirect, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy, furnishing, use, or reliance upon information provided herein. The vendee assumes and releases Stepan Company (and its employees, subsidiaries and affiliates) from all liability, whether in tort, contract or otherwise to the fullest extent possible under the relevant law.

© Stepan Company, 2017