

PROSLICK 977

■ Friction Reducer

> PRODUCT DESCRIPTION

ProSlick 977 is a low charge, viscosity building, high molecular weight cationic friction reducer designed for use in water based fracturing fluids, acids, and brines. Because it is a cationic polymer, ProSlick 977 is compatible with both nonionic and cationic additives for multi-system use.

> PACKAGING

ProSlick 977 is available in bulk transport. Other packaging is available upon request. Please note: Space left for expansion due to temperature.

> RECOMMENDED APPLICATION

ProSlick 977 may be batch mixed, but is usually added on the fly. Normal use rates may vary by application from ¼ to 1 gallon per 1000 gallons of fluid. In acids, dosages range from ½ to 1 gallon per 1000 gallons of fluid.

As with any fluid additive, compatibility testing is recommended prior to use. Please note that ProSlick 977 should not be used with anionic additives.

Prior to use, stir the container to ensure best results. Over time the product may settle out in the container. This is normal and does not affect product quality; mechanically agitate to re-disperse. Do not air-stir as moisture in air will hydrate the polymer, and a very viscous or semi-solid mass will result. ProFrac also recommends line flushing to prevent clogged lines due to other residues left in the lines.

ProSlick 977 may be cleaned from equipment using d-Limonene OF, LF-15 or MFS-Green. Depending upon the level of cleanup needed, these cleanup materials may be effectively used for up to three separate rinses.

Typical Physical Properties

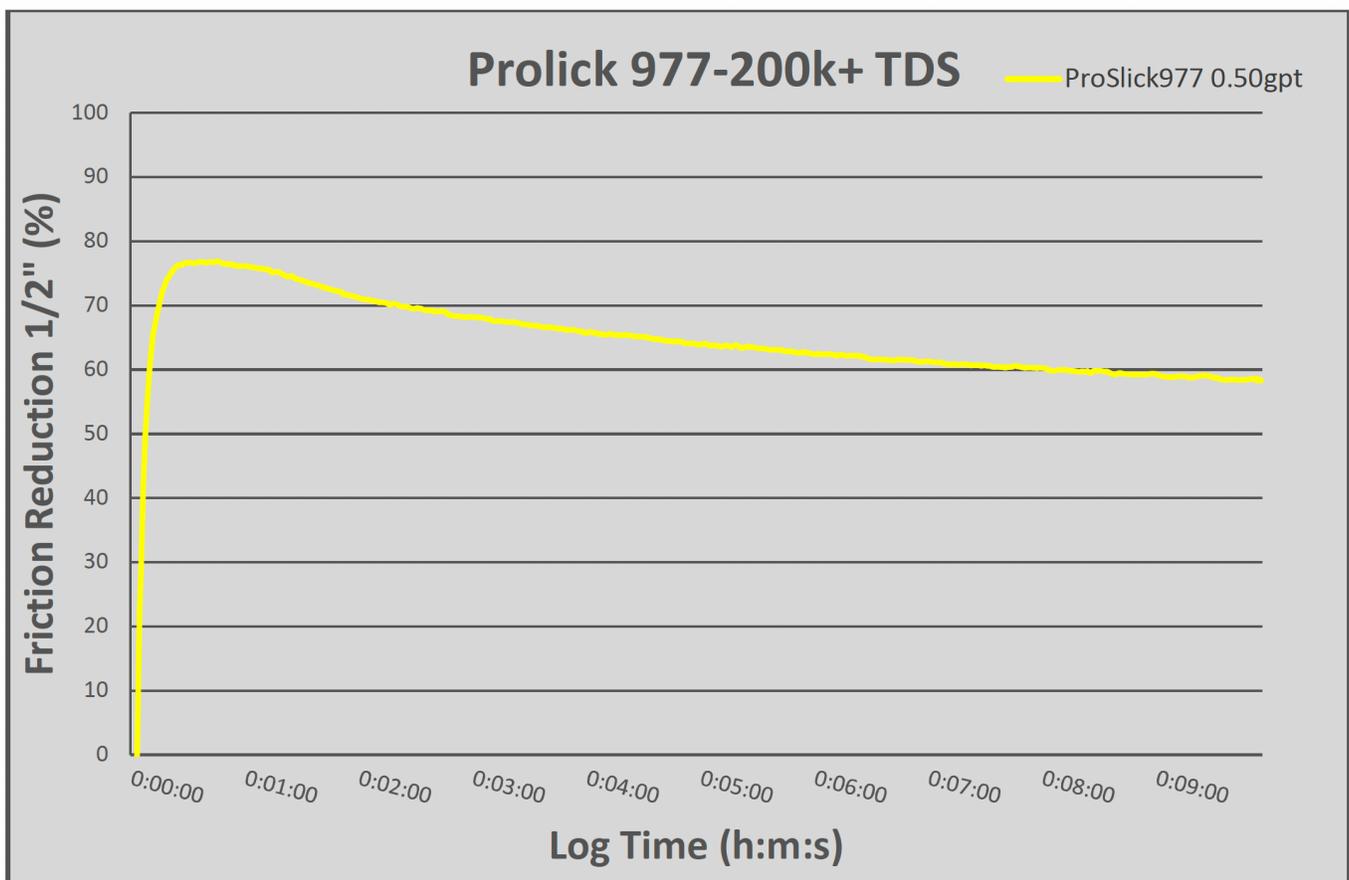
Flash Point (°F/°C)	>200 / >93
Freeze Point (°F/°C)	<41 / <5
Charge	Cationic
Specific Gravity	1.05 - 1.10
Solubility	Water, Acid, Brines

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ProSlick 977					
Viscosity over time					
GPT	1 min.	2 min.	3 min.	4 min.	5 min.
0.50	3.5	3.5	3.5	3.5	3.5
1.00	5	5	5	5	5
2.00	7	7	7	7	7
3.00	11.5	11.5	11.5	11.5	11.5
4.00	15	15	15	15	15