

OIL AID-BG-10

BUFFER FOR WATER GELLANTS

DESCRIPTION

OIL AID-BG-10 is a solid buffer that will adjust the pH of fracturing make-up waters to the 4.5 - 5.5 range. It is a white, crystalline powder with a bulk density of 40 lb/ft³.

APPLICATION

Many water gellant blends, such as OIL AID-WG-10 and OIL AID-WG-12, rely on an oxidizer or an enzyme to break down viscosity and the solution pH strongly affects the rate of breakdown. While breakdown will occur in solutions with a pH of up to 8.0, the fastest breakdown is at pH 5.0. By adjusting the pH of the make-up water to this point, OIL AID-BG-10 decreases the breaking time allowing the well to be opened up sooner with good clean-up. Its use should be helpful in low temperature wells, small jobs and those with short pumping times, and where surface water temperatures are low. It will also help when using nitrogen since short shut-in times are desired.

Some of OIL AID-BG-10's advantages are:

- It is a solid and does not possess the hazards associated with strong acids and bases.
- It will maintain the desired pH for considerably longer times than acids or bases.
- Concentrations of OIL AID-BG-10 are not critical within reason, whereas acid and base adjustments require very careful measurements of additions.

Some of the limitations of OIL AID-BG-10 are:

- Gellants like OIL AID-WG-10 and OIL AID-WG-12 must utilize continuous mix techniques because they break too rapidly for batch treating.
- It cannot be used with some water gellants like OIL AID-WG-40 and OIL AID-WG-41 because the lower pH will significantly reduce viscosity development.

The buffer can be used in fresh water, 1% KCl, API Brine (8% NaCl and 2.5% CaCl₂) and most other field water. OIL AID-BG-10 is not affected by up to 200 ppm of dissolved iron, 1% of sulfide, tannins, bicarbonates or magnesium.

RECOMMENDED TREATMENT

For make-up waters with pH in the 4 to 8 range, add 3 to 5 lb of OIL AID-BG-10 to each 1000 gal (gpt) of frac fluid. For waters outside this range up to 10 gpt may be used.

OIL AID-BG-10 should be premixed with the frac fluid along with other additives prior to addition of the gellant. After the buffer is dissolved, check pH. Adjust further, if necessary, with additions of HCl or more OIL AID-BG-10.

HANDLING

OIL AID-BG-10 is not normally hazardous though its dust may irritate eyes. If eye contact occurs, wash thoroughly with water. If pain or irritation persists, consult a physician.

PACKAGING

OIL AID-BG-10 is available in 50 lb bags.

OIL AID-BG-10 is a Messina trademark