WELLZYME A

Starch-specific enzyme

APPLICATIONS

- Dissolving starch component of RDF filtercake

ADVANTAGES

- Even drainage of the reservoir
- Noncorrosive to completion hardware
- Saves rig time by not requiring soak and circulating time needed by acids and oxidizers
- No adverse reaction with formation fluids, eliminating emulsion and precipitation problems
- Wells come online and clean up faster

LIMITATIONS

- Use only on filtercakes containing starch
- Enzyme activity diminishes in temperature >200 degF [> 90 degC]
- Optimum pH range is 6 to 8
- Calcium levels >400 mg/L reduce enzyme efficiency

WELLZYME A* starch-specific enzyme degrades starch fluid-loss-control material into simple sugars, destroying the integrity of the filtercake. The breakdown allows the bridging agent to disperse cleanly and efficiently. This enzyme is a complex 3D that catalyzes.

The enzyme moves across the filtercake surface until it finds an active site on the starch polymer chain into which it can fit. Cleavage takes place at this position.

WELLZYME A enzyme can be applied to most monovalent brines, and degrades most filtercakes in 16 h, depending on enzyme concentration and the reservoir temperature. The enzyme will not be consumed as it degrades the starch, and will continue to act until all of the starch material has been destroyed.

The recommended treatment is 2 to 5 vol % depending on the completion method and the required break time.

Toxicity and handling

Bioassay information is available on request. Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the MSDS.

Packaging and storage

WELLZYME A enzyme is packaged in 6.5-galUS [24.6-L] cans and 55-galUS [208-L] drums. Store in a dry location away from sources of heat or ignition, and minimize dust.

Typical Physical Properties	
Physical appearance	Clear brown liquid
Odor	Slight fermentation
Specific gravity	1.1 to 1.2