

## INFORMATION

# KLEEN-WATE

HIGH-DENSITY CLEAR BRINES

### DESCRIPTION

Calcium bromide solutions,  $\text{CaBr}_2$  95%, and zinc bromide solutions are a family of brine solutions used for well completions, workovers and packer fluids.

### APPLICATION

These fluids have been used to replace drilling mud as a completion and packer fluid. This is due to the fact that as a completion fluid the solids in the mud frequently damage the formation after the well is perforated and also interfere with sand consolidation treatments. As a packer fluid, the drilling muds settle out and will stick the packers. Our fluids solve these problems by providing a solids free fluid with the density range from 11.7 to 19.2 ppg (1.40 - 2.30 specific gravity). The material can be premixed to meet density requirements and will need no further mixing after delivery, with the exception of weighting up on location due to possible decreases in density due to accidental dilutions.

Results with these fluids have shown increased and prolonged production. For example, one operator previously completed using a weighted mud system and increased his production from 200 to 1,700 bbl per day using a calcium bromide based fluid. These fluids were designed for use in all situations requiring a heavy, clear water, non-damaging well bore fluid.

Among many of the applications for KLEEN-WATE brines are those listed below:

- Under-reaming
- Packer fluids
- Killing tubing strings
- Gravel packing
- Perforating
- Cleaning out debris
- Drilling-in fluids

Within the brochure, you will find detailed information concerning our KLEEN-WATE products. Should you have further questions or comments, please contact Messina's headquarters Dallas or one of Messina's representatives in your area.

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