

AQUADRIL

A High Performance Viscosifier and Bore-hole Stabilizer

DESCRIPTION

AQUADRIL is a unique polymer formulation developed by Messina as the key to a new level of performance in water-base drilling fluids. AQUADRIL's primary function is that of a viscosifier for a variety of water based drilling fluids. AQUADRIL can be used in place of bentonite in water well drilling and its use will save on material transportation, etc. as very small quantities of AQUADRIL would be required to achieve viscosity and hole cleaning.

AQUADRIL also serves other important functions in a variety of drilling fluids. AQUADRIL encapsulates drilled cuttings of clay and shale, and leaves a bonded protective film on exposed shales to prevent shale hydration, cleavage, sloughing, and dispersion. In addition, it is an excellent water-base lubricant.

APPLICATION

For water well drilling and civil engineering projects, AQUADRIL is superior to bentonite due to the fact that very small quantities are required and little or no mixing, shearing and aging is needed (as with bentonite). AQUADRIL achieves almost instantaneous viscosity development after addition to the mix water. AQUADRIL's anionic charge allows the product to coat the well bore with a thin lubricious film. This facilitates faster drilling.

Other uses of AQUADRIL include bentonite extension, flowline flocculation of drilled solids, and friction reduction in clear water drilling.

RECOMMENDED TREATMENT

Dosage and mode of addition will vary with specific application and with water hardness and salinity. A Messina technical service representative should be consulted for detailed recommendations, but the following general guidelines are offered:

- As viscosifier, 0.5-2.0 ppb (1.43-5.70 kg/m³).
- As encapsulator/filmer, 0.3-1.0 ppb (0.86-2.85 kg/m³).
- As bentonite extender, 0.02-0.10 ppb (0.06-0.29 kg/m³).
- As flowline flocculant, extremely low and variable, diluted 200:1 in water and added on demand basis upstream from shale shaker.
- As a friction reducer, or lubricant up to 2.0 ppb (2.85 kg/m³).

Typically, the product should be added at the mud hopper while mixing.

PACKAGING & HANDLING

AQUADRIL is available in plastic pails of 44 lb (5 gal) net weight. AQUADRIL is to be considered non-toxic, and non-hazardous. However, Protective chemical resistant gloves, and safety glass or goggles should be worn as a precaution when handling this product. If the product is spilled, the area will



become very slippery, and therefore, dangerous. Contain and cleanup all spills immediately with earthen or absorbent material dikes.

AQUADRIL is a Messina trademark

