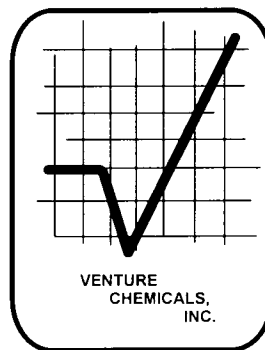


VENews

VENTURE CHEMICALS, INC. • P. O. BOX 53631 • LAFAYETTE, LA 70505



JANUARY 2001

VEN-K™

for Potassium Based Drilling Fluids

The potassium ion has long been accepted as having a significant inhibiting effect on swelling-type shales. As a result, potassium based drilling fluids have become widely utilized in the process of stabilizing such shales.

Many types of potassium based fluids have been developed over the years. These include: potassium chloride polymer muds, potassium hydroxide/lime muds, saturated potassium chloride systems, potassium acetate fluids, potassium carbonate muds and potassium formate systems. Although most of these muds vary widely in composition and properties, all of them depend on the inhibitive effect of the potassium ion.

The drilling industry generally accepts the fact that it is desirable to eliminate or at least minimize the addition of compounds containing the more dispersive sodium ion. This is the reason that more and more drilling fluid additives such as viscosifiers, fluid loss additives, dispersants, lubricants, etc. are being offered as the potassium salt rather than the more common and less expensive sodium salt. Lignite based products are commonly used in potassium based systems to provide some fluid loss properties

as well as some control over rheological properties. Naturally occurring lignite is slightly acidic because it contains a series of complex organic acids collectively referred to as "humic acids." When an alkaline material such as sodium hydroxide is added to lignite, it reacts to form the highly water soluble, sodium salt that is referred to as sodium humate.

In its partially water soluble/water dispersible form, lignite can function as an effective fluid loss additive. It will also function as a moderate dispersant under certain conditions. Because of their colloidal properties, water soluble lignites can also function as protective colloids; i.e., they can stabilize oil-in-water emulsions.

Because of the interest in low sodium containing lignite derivatives, Venture Chemicals, Inc. introduced VEN-K™ in the late 1970's. VEN-K™ is a potassium humate (lignite) formed by the reaction of potassium hydroxide with highly oxidized lignite. The result is an efficient, multi-purpose mud conditioner for water base muds.

See Product Corner on page 2 for additional information.



If your new year resolutions are already long forgotten, don't be disappointed, there's still plenty of chances to try again:

- January 14 - Russian
- January 24 - Chinese
- March 21 - Persian
- March 26 - Islamic
- April 14 - Hindu
- September 18 - Jewish

PRODUCT CORNER

The Scientific Method - What is it?

The scientific method is defined as: "The principles and empirical processes of discovery and demonstration considered characteristic of or necessary for scientific investigation, generally involving the observation, formulation of a hypothesis, experimentation to demonstrate the truth or falseness of the hypothesis, and a conclusion that validates or modifies the hypothesis." An immunologist discovered the luxury of working under this rule: "I now appreciate how much I learn by being wrong. I can change my mind when confronted with a rational argument, without the need to have the change appear to be purely semantic or to hope it will pass unnoticed. What must it be like to be a priest, general, bureaucrat, lawyer, medicine person, or politician who is never permitted to be wrong? No wonder they learn so slowly. I am grateful to be in a profession where the realization of being wrong is equivalent to an increase in knowledge."

- Melvin Cohn, *Annual Review of Immunology*, Vol. 12, 2 (1994)

VEN-K™ : POTASSIUM LIGNITE

VEN-K™ is a highly water soluble lignite produced by Venture Chemicals, Inc. This product is effective in water based drilling fluid systems where there is a need to minimize sodium ion concentration. Replacement of sodium ions in water based fluids will generally assist in minimizing shale hydration problems. Potassium liginites have been more effective in these types of water based systems than the corresponding sodium liginites.

VEN-K™ is primarily used as a fluid loss additive in these special water based drilling fluids. Although it is not a highly effective dispersant when compared to lignosulfonates. VEN-K™ does have some secondary ability to control rheological properties in certain water based drilling fluid systems. VEN-K™ can also be used to control HTHP fluid loss in almost all types of potassium based drilling fluids. In addition, it can be used to emulsify oils or other non-aqueous lubricants. If you are using a potassium based drilling fluid, why not investigate the effectiveness of VEN-K™? Additional information can be obtained by calling us at: (337) 232-1977 or faxing us at: (337) 237-5340.

THOUGHT TICKLERS



"The heights of great men reached and kept, were not attained by sudden flight, but they, while their companions slept, were toiling upward in the night."

- Henry Wadsworth Longfellow

"Thousands of candles can be lit from a single candle and the life of the candle will not be shortened. Happiness never decreases by being shared."

- Buddha

"In matters of principle, stand like a rock; in matters of taste, swim with the current."

- Thomas Jefferson

"People should think things out fresh and not just accept conventional terms and the conventional way of doing things."

- Buckminster Fuller

"You cannot step twice into the same river, for other waters are continually flowing on."

- Heraclitus

IN EUROPE AND THE MIDDLE EAST PLEASE CONTACT OUR DISTRIBUTOR:

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VENTURE CHEMICALS, INC. is a basic manufacturer of specialty chemical products used in the petroleum and chemical industries. Marketing is specifically oriented toward the drilling and production industry and to select market segments of the chemical industry. VENEWS is published by Venture Chemicals, Inc., P. O. Box 53631, Lafayette, LA 70505, as a service to users of VCI products and services. All correspondence should be addressed to Shana Nicholson, Editor, VENEWS, at the above address.

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VEN-BRIEFS

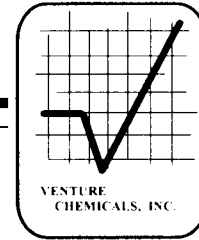
EVERYONE OUT OF THE POOL!

23 people contracted legionnaires' disease and 2 died in October 1996 after simply walking past a whirlpool in a home improvement store. After reported cases of pneumonia soared in Virginia, official investigation showed several victims were infected with *Legionella pneumophila*, the bacterium that causes legionnaires' disease. Official cause? A display model of a garden whirlpool spa (International Journal of Epidemiology, vol. 29, p. 1092). Denise Benkel, then with the CDC in Atlanta had this to say, "If I saw a spa, I wouldn't take a big old sniff."

HEADS UP!

The practice of using the guillotine to execute the condemned has mostly been outlawed. However, during its day, the question of how long the severed head remained conscious was heavily debated. Many cases of the head retaining some form of consciousness for up to 30 seconds are recorded. One involves the French chemist, Antoine Lavoisier. Lavoisier, who lived between 1743 and 1794, was caught up in the revolution and faced beheading. He asked friends to observe closely as he would continue blinking as long as possible after being killed. He was reported to have blinked for 15 seconds after decapitation.

HANDY CHARTS - N - TABLES



Density, or mud weight, is determined by weighing a precise volume of mud and dividing the weight by the volume. A mud balance is the most common way of obtaining a precise density.

Density is expressed in pounds per gallon (lb/gal), pounds per cubic foot (lb/ft³), grams per cubic centimeter (g/cm³), or as a gradient of pressure exerted per unit of depth. Density is commonly converted into specific gravity. Conversion factors are as follows:

TABLE 1

$$\text{Specific Gravity (SG)} = \frac{\text{g/cm}^3}{8.33} = \frac{\text{lb/gal}}{62.3}$$

$$\text{Mud gradient in psi/ft} = \frac{\text{lb/ft}^3}{144} = \frac{\text{lb/gal}}{19.24} = \text{SG} \times 0.433$$

$$\text{Mud gradient in kg/cm}^2/\text{m} = \text{SG} \times 0.1$$

TABLE 2

Here are some approximate densities of common mud materials:

	<u>g/cm³</u>	<u>lb/gal</u>	<u>lb/ft³</u>	<u>lb/bbl</u>	<u>kg/m³</u>
Water	1.0	8.33	62.4	350	1000
Oil	0.8	6.66	50	280	800
Barite	4.3	35.8	268	1500	4300
Clay	2.5	20.8	156	874	2500
Salt	2.2	18.3	137	770	2200

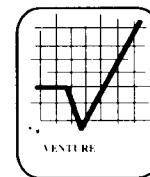
NEXT MONTH...



The Capillary Suction Time (CST) Instrument

FOR MORE INFORMATION

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 Please add my name to the VENews mailing list



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JANUARY 2001

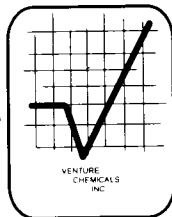
Venture Chemicals, Inc.

- lost circulation products
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- oil based products
- wetting agents
- viscosifiers
- seepage loss additives
- fluid loss additives
- shale control additives
- flocculants
- dispersants
- lubricants
- spotting fluids/additives

Can you find an efficient, effective and economical
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