RIG OIL sales & services

INFORMATION

ESSINA CHEMICALS

CA-FL1

CEMENT FLUID LOSS ADDITIVE

DESCRIPTION

CA-FL1 is a temperature stable organic polymer blend in free flowing powder form. It is a specially formulated, premium grade fluid loss control additive, for both freshwater and salt cementing compositions up to 18% (BWOW). This easy to use cement additive is fully compatible with most API cement classifications and other cement additives.

MAJOR ADVANTAGES

The application of CA-FL1 fluid loss additive provides the following advantages:

- Is fully compatible with several API cements including Classes A, C, and G. Reduces filtration in all freshwater cement slurries, and for most salt systems, up to 18%, as well. For specific applications where the mixing water is of high salt content, CA-FL8 may be more functional than CA-FL1.
- Ensures smooth, lump free mixing with full dispersion.
- Is fully compatible with all other cementing additives (i.e. accelerators, retarders, etc.).
- Prevents excessive slurry "dehydration" thereby minimizing the risk of "flash setting".
- Improves cement bonding due to water/cement ratio maintenance.
- Small additions provide effective fluid loss control in all fresh water cement slurries.
- Can be used at temperatures up to 350° F (177° C).

APPLICATION

CA-FL1 can be used in many diverse applications in primary and secondary cementing operations including casing cement slurries (especially where porous/permeable formations are encountered), lost circulation slurries, cement plug slurries in sand/sandstone formations, and "squeeze slurries".

RECOMMENDED TREATMENT

CA-FL1 is normally used in concentrations ranging from 0.5% to 1.3% by weight of cement. Reference to the attached tables illustrate typical filtration control rates achievable at different concentrations. It is strongly recommended that prior to a cementing operation, pilot tests are

made to evaluate the exact concentration of CA-FL1 required. All parameters should be considered, including anticipated pressure and temperature, cement type and other additives to be used in the slurry in order to ensure evaluation accuracy.

MIXING PROCEDURE

CA-FL1 fluid loss additive should be prepared using the following recommended procedure:

- The rig tank or mixing pit used for the slurry mix water should be thoroughly cleaned and checked for bad valves, leaks, etc.
- All discharge and suction lines should be flushed to remove drilling fluid sludge and debris.
- The required volume of slurry mix water should be added to the pit or tank, allowing some excess.
- CA-FL1 can be dry blended in the cement or added to the mix water slowly with moderate agitation for remote continuous mix operations.
- Add any other additives that may be required.
- Maintain the slurry mix water in constant agitation prior to the cementing operation using agitators, gun lines, etc. This will ensure even dispersion of all chemical additives.

SAFETY AND HANDLING

Normal precautions should be taken when handling CA-FL1. Protective gloves, goggles and masks should be worn by rig personnel when mixing this product. Eye contact could result in slight irritation. In this case, the eyes should be thoroughly flushed for a period not less than 15-20 minutes. If skin contact is for a prolonged period of time, CA-FL1 may cause irritation and in some cases a minor burn. The skin should be thoroughly flushed with water.

ADDITIONAL INFORMATION

CA-FL1 is an extremely effective fluid loss control additive in fresh water slurry preparation. At low temperatures (below 120° F (49° C), CA-FL1 has a retarding effect on cement slurries and due consideration should be given to include an accelerator (i.e. CA-A1) in the slurry program, to minimize W.O.C. time. In slurries prepared with extenders, filtration control is very difficult and expensive, due to the higher water content required. Laboratory tests should always be made in order to provide an accurate evaluation of slurry performance where a combination of additives will be used.

PACKAGING

CA-FL1 is packaged in either 50 lb or 25 Kg export quality sacks.

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TABLA 1

CA-FL1 FLUID LOSS CONTROL IN NEAT A.P.I. CEMENT SLURRIES

CEMENT CLASS	FLUID LOSS % CA-FL1	CCS/30 MIN 97° F	138° F
A	0.8 %	105	355
	1.0 %	80	135
G	1.0 %	85	125
	1.3 %	35	55

TABLA 2

CA-FL1 SLURRIES FLUID LOSS CONTROL IN 2% CaCl2 A.P.I. CEMENT

CEMENT CLASS	FLUID LOSS % CA-FL1	CCS/30 MIN 97° F	138° F
A	0.8 %	305	
	1.0 %	155	135
G	1.0 %	220	250
	1.3 %	130	175