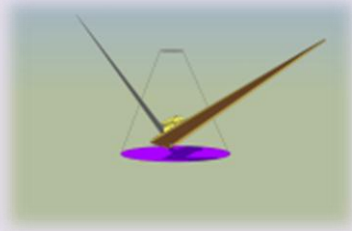


# UNIQUE DRILLING FLUIDS



## PRODUCT DATA

**UDF, INC.**

**1222 Commerce St.**

**Dallas, TX 75202**

**T:214-741-1100**

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## CD-U7-L/CD-U7-P

**CD-U7-L** is UDF's salt tolerant liquid environmentally friendly dispersant (Friction Reducer). It provides turbulent flow properties in cement slurries. The chemistry relies on the sulfonation of polymeric matter (Naphthalene) and hence this reaction mechanism is responsible for the environmental friendliness of the friction reducer. It is described chemically as such: naphthalene alone is a hazard to the environment, however, when sulfonated, naphthalene then becomes naphthalene sulfonate, which is environmentally benign.

The friction reducer is useful in reducing the apparent viscosity and improving rheological properties of the cement slurry (pump ability). It is effective in improving these characteristics in API cement slurries with salt concentrations in excess of 18% by weight of water. It can also be supplied as a solid (powder) and or applied directly to the slurry.

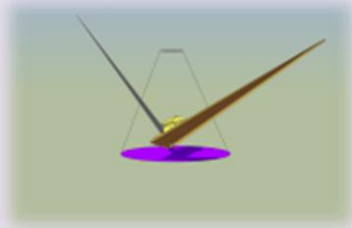
### APPLICATION

**CD-U7-L** is considered an environmentally safe dispersant but when reducing mixing water it has fluid loss control as well. It is compatible with non-retarding fluid loss additives such as PVA and also works well in salt cement slurries. It is effective with other cement additives such as de-foamers, CD-DFOAM-L, silica flour, retarders and several fluid loss additives.

**[www.uniquedrillingfluids.com](http://www.uniquedrillingfluids.com)**

***"GIVING THE WELL WHAT IT NEEDS"!***

# UNIQUE DRILLING FLUIDS



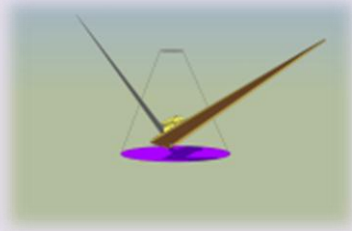
## PRODUCT DATA

LABORATORY DATA and TREATMENT (Data was taken using solid material CD U7-P)

TABLE 1. Data accumulated for 15.8 ppb cement slurries. The data is taken from untreated slurries and treated slurries. It shows the rheology difference when adding CD-U7-P compared to that of the untreated slurry.

CONSTITUENTS	UNTREAT	TREAT
API CLASS H CEMENT	700g	700g
H <sub>2</sub> O	266g	266g
SAT NaCl	98.6g	98.6g
PVA BWOC%	1.0	0.5
CD-U7-P (BWOC%)	-	1.00
ATM CONS (FINAL cp)	19	6
600 (rpm)	300+(cp)	52(cp)
300	300+	25
200	300+	17
100	268	9
6	67	3
3	55	3

# UNIQUE DRILLING FLUIDS



## PRODUCT DATA

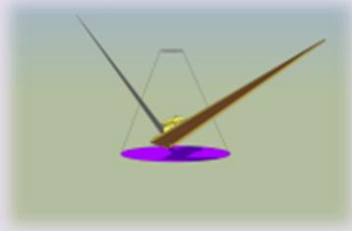


**FIGURE 1.** The picture reflects the reduction in apparent viscosity and the ease of pouring of the cement slurry after treatment with **CD-U7**.

### Discussion

In the above data, **CD-U7-L** application is exhibited by its ability to control rheology of cement slurries. The decrease in apparent viscosity allows for a pumpable slurry and non-gelling issues.

# UNIQUE DRILLING FLUIDS



## PRODUCT DATA

### PROPERTIES

- Clear Liquid (33% solution)
- Specific Gravity – 1.17
- Bulk Density – 9.75 lb./gal.
- Absolute Volume – 0.1026 gal./lb.
- Water Requirements – none
- Loading Rate – 0.9 to 0.44 gal./sk (0.33 to 1.66 L/sk)

### PACKAGING

**CD-U7-L** is packaged and can be shipped in 55 gal/208 l drums. Other packaging is available at our clients request.