DEEP SOUTH CHEMICAL

TECHNICAL DATA SHEET
April 1, 2011

DSC CEMENT RETARDER

Typical Range of Use:
- Temperature: 175°F - 375°F (80°C-177°C) BHCT
- Concentration 0.01-0.5 US Gallon/94 lb. sack
- Density: 12 to 20 lbs. / US gallon (1.44-2.4 g/cm^3)

Physical Properties:
- 56 WT. % Active solution of DSC Cement Retarder
- 0.0155 US gallons DSC Cement Retarder / 94 lb. sack = 0.1% DSC Cement Retarder BWOC
- Dark Brown Aqueous Liquid
- Specific Gravity = 1.3 g/cm^3

Application Areas:
- All API classes of cement
- Fresh water, Salt Water, or Sea Water Slurries

Purpose:
DSC Cement Retarder is an upper mid-range to high temperature liquid retarder that is typically added to the mixing water prior to preparation of the cement slurry. DSC Cement Retarder extends the thickening time of the cement slurry for the purpose of providing sufficient time for placement. DSC Cement Retarder has a mild dispersing effect on the cement slurry that reduces the concentration of the dispersant required and inhibits premature slurry gelation with most cement slurries. DSC Cement Retarder improves the performance of most fluid loss agents and is particularly beneficial when used with synthetic polymer additives.

Effect of DSC Cement Retarder on Thickening Time
Typical API Class H + 35% Silica Flour + Fresh Water @ 16.4 lbs. per US Gallon

Depth Feet	BHCT °F (°C)	API Thickening Time (Hour:Minute)							
		0.04 Gal./ Sack	0.06 Gal./ Sack	0.08 Gal./ Sack	0.10 Gal./ Sack	0.12 Gal./ Sack	0.15 Gal./ Sack	0.30 Gal./ Sack	0.40 Gal./ Sack
	175 (79)	4:35	5:52	6:42	7:59	(+) 8:00			
12000	200 (93)	3:03	4:00	4:47	6:59	7:20			
12000	225 (107)	2:25	3:15	4:15	5:17	6:07	(+)8:00		
14000	250 (121)	0:54	2:07	2:35	4:48	5:40	6:20	(+)8:00	
14000	275 (135)		1:05	1:15	3:25	5:15	5:25	7:53	(+) 8:00
16000	300 (149)				1:27	2:35	4:41	6:25	7:49
16000	325 (163)						2:50	4:38	6:15
18000	350 (177)							2:45	4:25
18000	375(190)								2:08