

**SUBJECT: SCR-100 Synthetic Cement Retarder**

Note

This bulletin replaces Field Bulletin No. 82.

**Table 1—SCR-100 Synthetic Cement Retarder, Powder**

Part No. (50-lb sk)	100003749	Density	11.8 lb/gal
Color	White	Specific Gravity	1.42
pH	3.2 to 3.6		

**Table 2—SCR-100 Synthetic Cement Retarder, Liquid**

Part No. (5 gal)	100012238	Part No. (55 gal)	100064072
Color	Blue	Density	9.66 lb/gal
pH	3.2 to 3.6	Pour Point	15°F
Specific Gravity	1.16	Freeze Point	10°F*

\*SCR-100 liquid is stable to freeze-thaw cycling and still can be used if it has been previously frozen.

**Introduction**

SCR-100 non-lignosulfonate cement retarder (Tables 1 and 2) can be effective at bottomhole circulating temperatures (BHCTs) up to 360°F, when combined with other additives. SCR-100 retarder is particularly useful in thixotropic cement slurries. Transition times of less than 30 min can be achieved when Halad-22A, Halad-9, or Diacel LWL additives are used in conjunction with SCR-100 retarder in freshwater cement.

When thixotropy is not required, SCR-100 retarder can be used with any fluid-loss additive to bridge the gap between the effective temperature ranges of HR-4, HR-5, and HR-12 retarders. SCR-100 retarder allows excellent 24-hr compressive strength when cured at BHCT. This retarder can also be effective in lightweight slurries formulated with Silicalite additive.

SCR-100 retarder can provide predictable retardation and high compressive strength development in freshwater cements up to 250°F BHCT and in salt-saturated cements from 245°F to BHCTs in excess of 350°F. When combined with Component R or TB-41 additives, it is effective at temperatures in excess of 360°F in freshwater systems.

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Exhibit No.         
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## Description

SCR-100 retarder comes in white powder form in 50-lb sacks and is nonhazardous in normal working conditions.

A liquid version of SCR-100 retarder is also available and contains 40% solids. Because SCR-100 retarder is a true aqueous solution, the settling problems that can occur with nonaqueous suspensions are not a problem. The response properties of liquid SCR-100 are the same as the powder.

Tables 3 through 6 (Pages 2 and 3) provide test data for slurries using SCR-100 retarder.

**Table 3—Thickening Time and Compressive Strength Development**  
Premium Cement; SSA-2 Additive = 35%; Water = 4.8 gal/sk; Density = 16.9 lb/gal

SCR-100 Retarder (% bwoc)	Halad-344 Additive (% bwoc)	Test Temp. (°F)	Thickening Time (hr:min)	Initial Set Time (hr:min)	24-hr UCA Analyzer Strength (psi)
0.5	0.5	150	5:45	12:35	2,650
1.3	0.5	245	4:26	5:37	3,400

**Table 4—SCR-100 Retarder with Component R Additive**  
Premium Cement; SSA-2 Additive = 35%; Hi-Dense No. 3 Weight Additive = 36 lb/sk;  
GasStop Additive = 0.5%; D-Air Defoamer = 0.25%; Halad-413 Additive = 0.25%;  
Density = 18.5 lb/gal; Water = 5.2 gal/sk

SCR-100 Retarder (%)	Component R Additive (%)	Thickening Time at 359°F (hr:min)	Fluid Loss at 359°F (cc/30 min)
1.2	1.2	3:42	36 <sup>a</sup>
1.3	1.3	5:10	52
1.4	1.4	5:52	—

<sup>a</sup>With 0.3% Halad-413 additive.

**Table 5—SCR-100 Retarder with TB-41 Additive**  
Super Lightweight Cement;<sup>a</sup> SSA-1 Additive = 25 lb/sk;  
FWCA = 0.3%; Halad-413 Additive = 1.5%; Water = 8.76 gal/sk;  
Density = 13.5 lb/gal

SCR-100 Retarder (%)	TB-41 Additive (%)	Thickening Time at 325°F (hr:min)
1.2	1.2	2:46
1.5	1.5	6:03
1.7	1.7	7:20

<sup>a</sup>Super Lightweight cement includes 84-lb sack of 47 lb Premium cement, 18.5 lb Pozmix A cement, and 18.5 lb Silicalite additive.

Table 6—SCR-100 Retarder in Lightweight Cement Slurries

Super Lightweight Cement;<sup>a</sup> Halad-22A Additive = 0.6%;

Water = 7.5 gal/sk; Density = 13.2 lb/gal

SCR-100 Retarder (%)	Thickening Time at 153°F (hr:min)	180°F at 24 hr Compressive Strength (psi)	180°F at 1,000 psi Fluid Loss (cc/30 min)
0.3	2:29	—	—
0.4	5:00	3,430	92
0.5	6:45	—	—
0.6	9:37	—	—

<sup>a</sup>Super Lightweight cement includes 84-lb sack of 47 lb Premium cement, 18.5 lb Pozmix A cement, and 18.5 lb Silicalite additive.

## Handling and Storage

Precautions should be taken to avoid exposure to high concentrations of dust and excessive skin contact. Because the material is hygroscopic, the dust will feel sticky on the skin and should be rinsed off, as it may be irritating.

Important      SCR-100 liquid is acidic and should only be stored in plastic or stainless steel containers with control valves of the same materials.

## Technical/Ordering Information

To order SCR-100 cement retarder, contact your local warehouse.

If you have questions, contact Tom Dealy at 580.251.4810 or [Tom.Dealy@Halliburton.com](mailto:Tom.Dealy@Halliburton.com).

