

Selvol™ Premiol OSC 10 - Technical Data Sheet

PRODUCT INFORMATION

Selvol™ Premiol OSC 10 is a non-retarding, fluid loss control additive designed specifically for off-shore cementing.

Selvol™ Premiol OSC 10 is an environmentally friendly aqueous solution that provides fluid loss control at temperatures up to 170°F (77°C). The solution is 22% active.

Typical Selvol™ Premiol OSC 10 concentrations range from 0.75 to 1.5 gal/sk, depending on bottom hole conditions and slurry design.

Physical Properties

- Clear liquid solution
- Specific Gravity – 1.09

Applications

- Off-shore cementing

Benefits

- Aqueous solution
- Fully dissolved
- High concentration with manageable viscosity
- Excellent freeze-thaw stability
- Good solution stability
- Displays desired pumpability across a wide temperature range
- Compatible with other streams
- Does not retard cement
- Functions well in temperatures up to ~170°F (77°C)
- Environmentally friendly
- Meets industry standards for fluid loss control agents
 - Rheology
 - Free water
 - API fluid loss

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SLURRY PERFORMANCE

Typical Performance for different slurries with Selvol™ Premiol OSC 10

Test Temperature (F)	120°	120°	120°	168°	170°	170°
Density (ppg)	16.6	16.6	16.6	16.6	16.6	16.6
Selvol™ Premiol OSC 10 (gal/sk)	0.86	0.86	0.86	0.86	0.74	0.78
API Fluid Loss (mL/30min)	14	11	22	85	64	68
Free Water (%) at Test Temperature	2	-	1.6	1.6	-	-

Slurry Design: Class H Cement + 0.5% to 1.0% bwoc Dispersant + 0.02 gal/sk Defoamer + 0.01 gal/sk Retarder

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RECOMMENDED SLURRY DESIGN

Well Condition

13-5/8 intermediate liner
 8,200 depth
 BHST = 145°F (63°C)
 BHCT = 120°F (49°C)
 BH Pressure = 6,000 psi

Slurry

Texas Lehigh Class H Cement
 0.86 gal/sk Selvol™ Premioli OSC 10
 0.625 bwoc Daxad 19
 0.02 gal/sk FP-6L
 3.32 gal/sk fresh water

Density = 16.6 lb/gal
 Yield = 1.05 cu-ft/sk

Rheology

Temperature	300 rpm	200 rpm	100 rpm	60 rpm	30 rpm	6 rpm	3 rpm	PV	YP
80°F	340	244	130	84	46	14	8	315 cP	25 lb/100ft ²
120°F	230	154	80	48	26	6	4	225 cP	5 lb/100ft ²

Free Water

Temperature	Measured Fluid	Free Water (%)
120°F	4 mL	1.6

Fluid Loss

Temperature	Collected Fluid	Time	Fluid Loss
120°F	11 mL	30 min	22cc/30-min

Compressive Strength

Condition	Time
50 psi	7:10 (hrs:min)
500 psi	8:05 (hrs:min)
2646 psi	12:00 (hrs:min)
4604 psi	24:00 (hrs:min)

Thickening Time

Condition	Time	Pressure	Temperature
Initial	0 min	760 psi	80°F
Final	37 min	6000 psi	120° F

Time to 70 Bc **4:42 (hr:min)**

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RECOMMENDED SLURRY DESIGN

Well Condition

9-7/8 drilling liner
 11,500 depth
 BHST = 197°F (91.6°C)
 BHCT = 168°F (75.5°C)
 BH Pressure = 9,500 psi

Texas Lehigh Class H Cement
 0.86 gal/sk Selvol™ Premiol OSC 10
 0.625 bwoc Daxad 19
 0.02 gal/sk FP-6L
 0.01 gal/sk Kelig 32 (50% sol'n)

Slurry

0.20% bwoc sodium meta silicate
 3.32 gal/sk fresh water
 Density = 16.6 lb/gal
 Yield = 1.05 cu-ft/sk

Rheology

Temperature	300 rpm	200 rpm	100 rpm	60 rpm	30 rpm	6 rpm	3 rpm	PV	YP
80°F	300	200	112	70	40	10	4	282 cP	18 lb/100ft ²
168°F	138	90	46	24	16	4	2	138 cP	1 lb/100ft ²

Free Water

Temperature	Measured Fluid	Free Water (%)
168°F	4 mL	1.6

Fluid Loss

Temperature	Collected Fluid	Time	Fluid Loss
168°F	30 mL	15 min	85cc/30-min

Compressive Strength

Condition	Time
50 psi	9:01 (hrs:min)
500 psi	10:12 (hrs:min)
1234 psi	12:00 (hrs:min)
2918 psi	24:00 (hrs:min)

Thickening Time

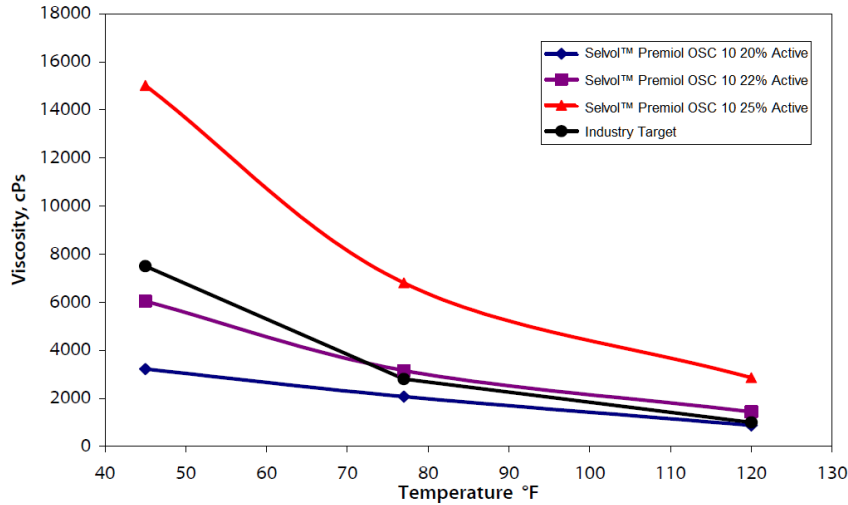
Condition	Time	Pressure	Temperature
Initial	0 min	1000 psi	80°F
Final	48 min	9500 psi	168°F

Time to 70 Bc **3:12 (hr:min)**

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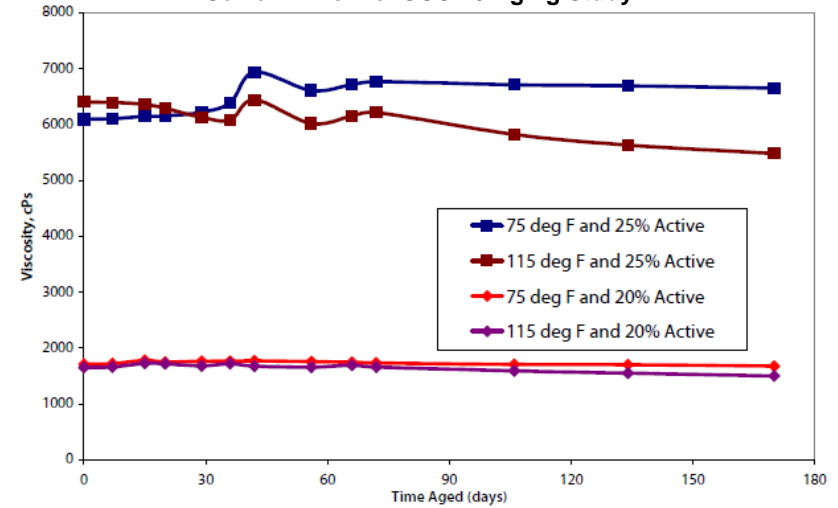
Pumpability

Viscosity of Selvol™ Premioli OSC 10 vs. Temperature



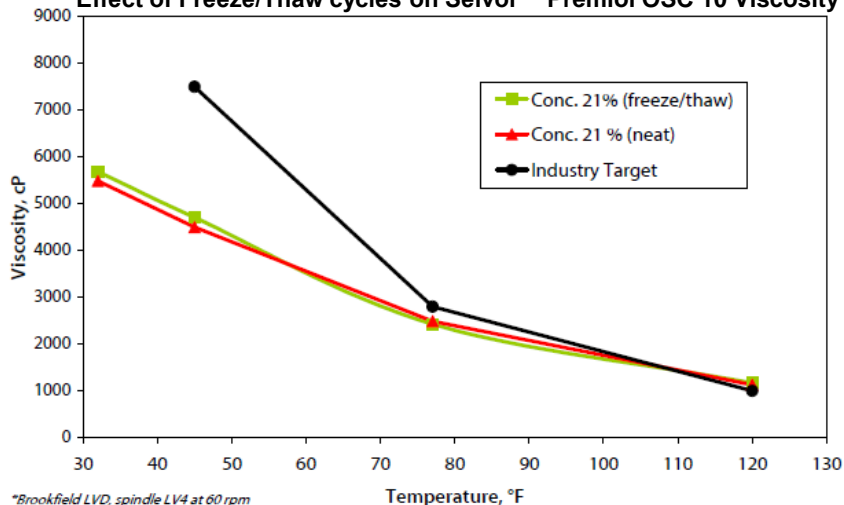
Stability

Selvol™ Premioli OSC 10 Aging Study



Freeze/Thaw

Effect of Freeze/Thaw cycles on Selvol™ Premioli OSC 10 Viscosity*



*Brookfield LVD, spindle LV4 at 60 rpm

Performance

- Selvol™ Premioli OSC 10 displays desirable pumpability across a wide temperature range and after freeze-thaw exposure
- Aging studies prove solution stability over time despite high concentrations
 - Selvol™ Premioli OSC 10 has an optimum shelf life of four to six months
 - Shelf life could be extended with addition of Sekisui recommended biocide, KathonLX.
- Selvol™ Premioli OSC 10 has excellent freeze-thaw stability