

# Premiol™ DWC 50 - Technical Data Sheet

## PRODUCT INFORMATION

Premiol™ DWC50 is a fluid loss control additive that was designed specifically for high-temperature applications.

Premiol™ DWC50 is a nonretarding powder that provides fluid-loss control for cement slurries at temperatures ranging up to 300 F.

Typical Premiol™ DWC50 concentrations range from 0.5% to 1.5% by weight of cement (%bwoc). Concentration will depend on bottom hole temperature and desired slurry density. Premiol™ DWC50 can be used in slurries with a wide range of densities (15.6 ppg up to 17.1 ppg).

### PHYSICAL PROPERTIES

- Brown Powder
- Specific Gravity - 1.11

### APPLICATIONS

- Deep well cementing
- Fluid loss control from 100 F to 300 F

### BENEFITS

- Premiol™ DWC additive works well to 300 F (150 C)
- Powder form
- Meets industry standards for fluid loss control agents
  - API fluid loss (1000 psi) of < 100 mL/30-min
  - PV < 200 cp, YP > 0 lb/100-sq.ft.
  - Free fluid < 2%
- Nonretarding
- Compatible with multiple additives
- Mixable at high densities
- Adjustable rheology
- Easy to design
- Environmentally friendly
- Dissolves easily under ambient conditions
- Easy to handle
- Could be used across a large temperature range
- Lower in cost than other high temperature additives

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## SLURRY PERFORMANCE

Typical Performance for different slurries with Premiol™ DWC 50									
Temperature (F)	100	150	200	250	250	250	263	300	300
Density (ppg)	17.0	17.0	17.0	16.5	16.5	16.8	16.4	16.4	16.5
Premiol™ DWC 50 (% bwoc)	0.56	0.56	0.56	0.56	1.0	0.56	1.0	1.5	0.71
API Fluid Loss (mL/30min)	12	20	20	92	44	52	52	70	82
Thickening Time (to reach 70 Bc)	-	-	-	-	5h12m	-	-	4h56m	-
Free Water (%) at 190F	1.2	2.4	0.8	0.8	2.4	2.4	-	0.0	0.0
Compressive Strength 12hr (psi)	-	-	-	-	1726	-	1905	1148	-
Compressive Strength 24hr (psi)	-	-	-	-	1823	-	2625	2113	-

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## RECOMMENDED SLURRY DESIGN

### WELL CONDITION

7" Liner  
 17,000 depth  
 BHST = 337 F (169 C)  
 BHCT = 300 F (149 C)  
 BH Pressure = 12,350

### SLURRY

Texas Lehigh Class H Cement  
 35% bwoc 100-mesh silica flour  
 1.13% bwoc Premiol™ DWC 50  
 0.03 gal/sk FP-6L  
 0.25 gal/sk Kelig-32  
 4.94 gal/sk fresh water  
 Density = 16.5 lb/gal  
 Yield = 1.39 cu-ft/sk

## Rheology

Temperature	300 rpm	200 rpm	100 rpm	60 rpm	30 rpm	6 rpm	3 rpm	PV	YP
80 °F	510	364	204	134	76	20	14	459 cP	264 lb/100ft <sup>2</sup>
190 °F	280	194	104	64	34	8	6	51 cP	16 lb/100ft <sup>2</sup>

### Free Water

Temperature	Measured Fluid	Free Water (%)
190 °F	0 mL	0.0

### Fluid Loss

Temperature	Collected Fluid	Time	Fluid Loss
300 °F	26 mL	30 min	52cc/30-min

### Compressive Strength

Condition	Time
50 psi	7:44 (hrs:min)
500 psi	9:03 (hrs:min)
2380 psi	12:00 (hrs:min)
3548 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 | 4:20 (hr:min)

Note: High Rheology does not reflect difficult mixing. Slurry is extremely easy to prepare, viscosity hump is not present.

