



# FL 05

## FL 05 POWDER NON-RETARDING FLUID LOSS AGENT

### TYPICAL RANGE OF USE

- TEMPERATURE: 70°F – 450°F (21°C - 232°C) BHCT
- CONCENTRATION: 0.25% – 1.5 % BWOC
- DENSITY: 12 to 20 lb.'s / US gallon (1.44 – 2.4 g/cm<sup>3</sup>)

### PHYSICAL PROPERTIES

- WHITE POWDER
- SPECIFIC GRAVITY = 1.66 g / cm<sup>3</sup>
- COMPLETE WATER SOLUBILITY

### APPLICATION AREA'S

- ALL API CLASSES OF CEMENT
- FRESH WATER, SALT WATER, OR SEA WATER SLURRIES

### PURPOSE

**FL 05** is a low to high temperature range polymer that is dry blended with the cement powder prior to preparation of the cement slurry. **FL 05** is a non-retarding fluid loss agent. The non-retarding property of **FL 05** reduces the need for accelerators at low temperatures or with light weight cement slurries. The fluid loss control performance of **FL 05** is improved when used in conjunction with DHS dispersants, and retarders.

EFFECTS OF FL 05 ON FLUID LOSS							
API Class H + Fresh Water @ 16.2 lb.'s / gallon							
FL 05 (Fluid Loss Additive) % BWOC	DS 20 (Dispersant) RPM % BWOC	API Fluid Loss in cm <sup>3</sup> per 30 minute's					
		80°F	100°F	125°F	150°F	175°F	200°F
0.5	0	165	175	190	215	230	--
0.35	0.5	48	55	68	78	125	155
0.5	0.5	30	42	54	60	78	98
0.7	0.5	25	32	38	44	56	62

NON-RETARDING EFFECTS OF FL 05 ON THICKENING TIME			
API Class H + Fresh Water @ 16.2 lb.'s / gallon			
FL 05 % BWOC	API Thickening Time in Hours : Minutes		
	80°F	100°F	125°F
0	6:20	3:12	2:05
0.75	5:16	3:15	2:07
1.25	4:53	3:20	2:10

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# FL 05

Fluid Loss Additive

## FL 05 POWDER NON-RETARDING FLUID LOSS AGENT

EFFECTS OF <b>FL 05</b> ON FLUID LOSS				
API Class H + 35% Silica Flour + 0.5% DS 20 + Fresh Water @ 16.2 lb.'s / gallon				
<b>FL 05</b> (Fluid Loss Additive) % BWOC	API Fluid Loss in cm <sup>3</sup> per 30 minute's			
	225°F	250°F	275°F	300°F
0.6	105	120	135	168
0.7	78	86	94	120
0.8	58	66	78	95

EFFECTS OF <b>FL 05</b> ON FLUID LOSS								
API Class H + 35% Silica Sand + Fresh Water								
Density Lb./Gal.	<b>FL 05</b> %BWOC	<b>DS 20</b> (Dispersant) %BWOC	Hemitite %BWOC	RT 30 %BWOC	Temp. °F	PV cP	YP Lbf.100 ft <sup>2</sup>	Fluid Loss cc/30 min.
17.5	0.5	0.3	0	0.4	194	131	14	138
17.5	0.6	0.4	0	0.4	194	170	11	92
17.5	0.6	0.6	0	0.4	194	201	10	68
18.0	0.4	0.5	0	0.4	194	234	22	110
18.0	0.6	0.5	0	0.4	194	320	35	81
18.0	0.6	0.5	30	0.2	194	120	16	112

EFFECTS OF <b>FL 05</b> ON FLUID LOSS AND THICKENING TIME							
API Class G + Fresh Water @ 15.8 lb.'s / gallon							
<b>FL 05</b> %BWOC	<b>DS 20</b> %BWOC	NaCl %BWOW	Temp. °F	PV cP	YP Lbf/100 ft <sup>2</sup>	Fluid Loss Cc/30 min.	Thickening Time Hr:Min.
0.3	0.4	3	80	41	5	204	8:07
0.5	0.4	3	80	60	3	75	--
0.7	0	3	80	69	14	186	--
0.7	0.15	3	80	73	11	86	5:00
0.7	0.25	3	80	77	8	68	--
1.0	0	3	80	100	22	66	5:56
1.0	0.15	3	80	102	20	45	--

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## FL 05

### FL 05 POWDER NON-RETARDING FLUID LOSS AGENT

EFFECTS OF <b>FL 05</b> ON FLUID LOSS AND THICKENING TIME API Class G + Fresh Water @ 15.8 lb.'s / gallon							
<b>FL 05</b> (Fluid Loss Additive) % BWOC	<b>DS 20</b> (Dispersant) % BWOC	<b>RT 40</b> (High Temp Retarder) % BWOC	Temp. °F	PV CP	YP lb <sub>r</sub> / 100 ft <sup>2</sup>	Fluid Loss cc / 30 min.	Thickening Time Hr : Min.
0	0	0	80	--	--	--	9:40
0.3	0.4	0	80	46	2	86	8:07
0.45	0.4	0	80	59	6	49	--
0.7	0	0	80	84	18	106	7:47
1.0	0	0	80	110	26	48	8:00
0.7	0	0	150	56	31	282	1:40
0.7	0.15	0	150	43	14	100	2:34
0.7	0.25	0	150	42	11	78	3:18
0.7	0.4	0	150	46	11	62	4:00
0.7	0	0.15	150	67	29	131	7:17
0.7	0.15	0.15	150	75	34	119	6:15
0.7	0.4	0.15	200	54	13	92	--

EFFECTS OF <b>FL 05</b> ON FLUID LOSS AND THICKENING TIME API Class G + 35% Silica Flour + Fresh Water @ 15.8 lb.'s / gallon							
<b>FL 05</b> % BWOC	<b>DS 20</b> % BWOC	<b>RT 40</b> % BWOC	Temp. °F	PV CP	YP lb <sub>r</sub> / 100 ft <sup>2</sup>	Fluid Loss cc / 30 min.	Thickening Time Hr : Min.
0.7	0.4	0.15	200	54	5	127	2:45
0.7	0.4	0.35	250	47	2	77	5:29
1.0	0.4	0.15	200	80	18	60	4:26
1.0	0.4	0.35	250	75	15	86	5:29
1.0	0.4	0.6	275	69	14	88	4:18
1.0	0.4	1.0	300	65	10	86	5:18

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## **FL 05**

Fluid Loss Additive

### **FL 05 POWDER NON-RETARDING FLUID LOSS AGENT**

EFFECTS OF <b><u>FL 05</u></b> ON FLUID LOSS					
API Class C + Fresh Water @ 14.8 lb.'s / gallon					
<b><u>FL 05</u></b> %BWOC	<b><u>DS20</u></b> %BWOC	NaCl %BWOW	API Fluid Loss, cc/30 minutes		
			80°F	110°F	125°F
0.6	0.25	0	282	327	402
0.7	0.25	0	182	193	240
1.0	0.25	0	66	70	80
0.6	0.25	3	324	364	448
0.7	0.25	3	222	240	302
0.8	0.25	3	102	158	196
1.0	0.25	3	84	88	103
0.5	0.5	0	320	367	422
0.7	0.5	0	140	154	202
1.0	0.5	0	59	66	77

EFFECTS OF <b><u>FL 05</u></b> ON FLUID LOSS				
(35:65) Poz : API Class C + 6% Gel + Fresh Water @ 12.8 lb.'s / gallon				
<b><u>FL 05</u></b> %BWOC	NaCl %BWOW	API Fluid Loss, cc/30 minutes		
		80°F	100°F	125°F
1.0	0	210	240	308
1.25	0	114	135	166
1.5	0	68	76	99
2.0	0	36	44	22
1.0	3	286	336	387
1.25	3	160	190	242
1.5	3	106	112	125

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