

Gilsonite **Oil & Gas**

FLC " FLUID LOSS CONTROL HM HT

HT HP Filtrate Loss Control
HIGH TEMPERATURE , HIGHT MELTING POINT

Treated Gilsonite

APPLICATION & ADVANTAGES

Gilsonite based product which provides optimum filtration control for in water based muds and oil base mud systems. Gilsonite will reduce both API and HTHP filter losses, provide for a more stable wellbore while drilling troublesome shales and clays, and increase emulsion stability in OBM's.

Gilsonite use in oil base mud systems when cement slurry design to combat lost circulation and improve cement slurry properties. About the same time, it was tried and used in water-based drilling fluids to assist in borehole stabilization. use of it as a fluid is loss agent in oil and synthetic muds, used to seal off low pressure zones, preventing differential sticking, lubricity, and in low invasion coring fluid.

Gilsonite is widely used to prevent or cure loss of cement slurry circulation while cementing oil and gas wells A high temperature, high-pressure (HTHP) filter loss Gilsonite is widely and effectively used to prevent or cure loss of slurry circulation while cementing oil and gas wells. Also it use in Gilsonite Leads Fight, Against Lost Circulation, Stabilizes Sloughing Shales and Borehole Stabilizera fresh mud. Treat system as needed during drilling operations to control filtrate loss.

LOST CIRCULATION

The primary use for Gilsonite is in restoring lost circulation due to the bridging action of the angular Gilsonite solids at the point of lost returns. Its effectiveness is due to the particle-size distribution. The larger and medium-size particles bridge forming a network which retains the finer particles. Thus, a dense deposit is formed which is sealed by the cement. Decreasing the slurry weight by using an extender helps in controlling lost circulation by reducing the hydrostatic pressure.

Gilsonite is a naturally occurring black asphaltite hydrocarbon with a particle size between 0.2 and 2 mm. For lost circulation control, application rates vary between 50 to 600 kg/m . Because of its melting point, it should not be used where bottom hole temperatures exceed 165-205 °C.

USE AS AN EXTENDER

Gilsonite can be used to lighten the slurry and increase the slurry yield but will still provide a relatively high-strength set cement. Large amounts of water are not required for Gilsonite. The reduction of slurry density is primarily the result of the low specific gravity of the gilsonite.

MIX WATER REQUIREMENTS

One extra gallon of water is normally used for each 25 lb of Gilsonite. Normally P-EBA is required to prevent gravitational separation of a material having such a wide variance in density from the slurry. Because such a small amount of Gilsonite is required, it can be blended into the slurry without the use of P-EBA.

THICKENING TIME

Gilsonite is an inert solid and, owing to the small amount of additional water required, does not appreciably change the thickening time of the slurry.

COMPRESSIVE STRENGTH

Higher compressive strength is generally attainable when solid particles are added to a slurry without adding excessive quantities of water. Laboratory tests indicated the cements containing either gilsonite or ground coal extender have higher strengths at all ages than most other available lightweight or lost-circulation slurries at the same slurry weight, although the strength is less than that of the same neat cement systems without the Gilsonite.

GILSONITE 109GP API Grade

Typical Properties

Softening Point (ASTM E28-92)	185-220°C 356-428°F
Ash (ASTM D271-70M)	<=3%
Moisture (AGC Method)	<=1.5%
Penetration (25°C, 100 gm, 5 sec.)	0-2
Specific Gravity	1.04-1.16
Color in Mass	Black
Flash Point (COC)	320°C; 600°F
Sulfur	0.3%



Typical Particle Sizing (ASTM E11-70)

	% Retained (Cumulative)	
	Pulverized	
+ 10 mesh	--	
+ 35 mesh	0	
+ 65 mesh	<=1	
+ 100 mesh	<=5	
+ 200 mesh	<=20	

GILSONITE 109GR API Grade

Typical Properties

Softening Point (ASTM E28-92)	220-250°C 430-482°F
Ash (ASTM D271-70M)	<=3%
Moisture (AGC Method)	<=1.5%
Penetration (25°C, 100 gm, 5 sec.)	0-2
Specific Gravity	1.04-1.16
Color in Mass	Black
Flash Point (COC)	320°C; 600°F
Sulfur	0.3%

GILSONITE 109 GW API Grade

Typical Properties

Softening Point (ASTM E28-92)	250-270°C 482-518°F
Ash (ASTM D271-70M)	<=3%
Moisture (AGC Method)	<=1.5%
Penetration (25°C, 100 gm, 5 sec.)	0-2
Specific Gravity	1.04-1.16
Color in Mass	Black
Flash Point (COC)	320°C; 600°F
Sulfur	0.3%