



PLUGZ-IT™



PLUGZ-IT™ is a lost circulation material designed to mix and pump with a drilling fluid into cobble, gravel, or fractured zones to restore mud circulation. Engineered for use in fresh water systems, PLUGZ-IT™ has applications in the vertical and horizontal directional drilling industries. It readily seals off coarse gravels, fractured formations, and other profiles where mud-loss is a problem. PLUGZ-IT™ can be placed directly through the jets in the bit provided they are a minimum of 3 mm or 1/8" in size. PLUGZ-IT™ is environmentally safe and non-toxic.

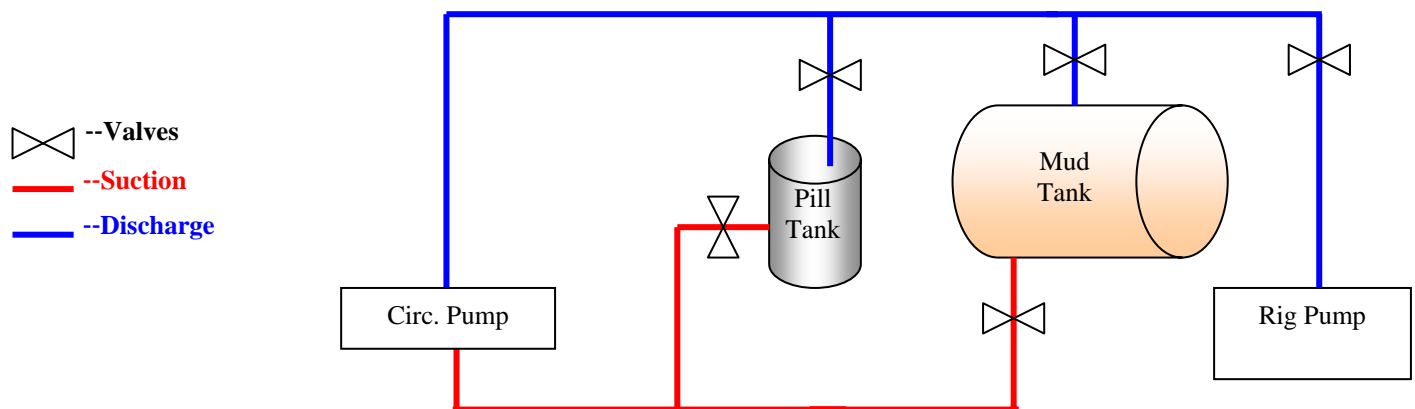
APPLICATION:

A. As a Pill: In a separate ("pill") tank, mix EXTRA HIGH YIELD™ or TRU-BORE® to a Marsh Funnel Viscosity of 45 to 65 seconds. Add PLUGZ-IT™ at a rate of 20 to 40 pounds per 100 gallons. Mix in small batches, 50 to 100 gallons at a time.

1. Add PLUGZ-IT™ slowly into "Pill" tank and circulate for 1 to 2 minutes.
2. Once the appropriate quantity is added, quickly pump from the "Pill" tank into place, pulling the drill steel back slowly as the mixture is pumped into the loss zone.
3. Pump pressure should remain elevated while pumping to insure PLUGZ-IT™ is being squeezed into fractured or unconsolidated zones.
4. Once all the material is in place; pullback 5 to 10 feet and continue to pump in order to purge the drill string. Once in place the PLUGZ-IT™ pill should set for 20 to 30 minutes, allowing for complete hydration and swelling to take place. Circulation should be restored at this point.
5. Advance back into the hole slowly, using low pump pressure, circulating as you progress and continue the drilling operation. If mud loss is still a problem, repeat the process.

B. To prevent mild mud loss during drilling or back reaming, mix 15 to 20 pounds per 100 gallons of drilling fluid in the standard mud mix tank.

MIXING SCHEMATIC



PLUGZ-IT™ is conveniently packaged in 30-pound multi-walled paper bags.