

HYDRO-PLUG®

Product Description

HYDRO-PLUG® lost circulation material is a combination of products and contains a key component that hydrates and swells to form a compliant treatment. It is a simpler system than one that chemically cross-links, and has minimal changes in reaction rate with temperature. HYDRO-PLUG lost circulation material also contains a combination of resilient graphitic carbon and other sized components. Incorporating the swelling polymer along with engineered combinations of resilient graphitic carbon and other materials creates a hybrid chemical/particulate treatment that is often more effective than a single type of treatment. This product can be mixed and pumped through bits and downhole motors using the rig pumps and can be applied in both low and high permeability formations.

Applications / Functions

- HYDRO-PLUG lost circulation material will work with all types of water-based and oil-based drilling fluids but must be mixed in fresh water. HYDRO-PLUG lost circulation material is ideal for use in deep water operations where synthetic base drilling fluids are in use.

Advantages

- Mix and pump without costly trips
- Quick-acting sealant for vugular, fractured formations and severe loss zones
- Rapid mixing through standard hopper
- One-sack product provides compact storage; each pallet of HYDRO-PLUG lost circulation material makes a 25-bbl pill
- No special equipment is required to place the pill, just the rig pump

Typical Properties

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| • Appearance | Mixture of dark gray to black granules and flakes |
| • Specific gravity | 2 |

Recommended Treatment

For normal treatment, add 45 bbls of freshwater (freshwater only) to a clean pit. Add 80 50-lb bags of HYDRO-PLUG lost circulation material. Do not add CAUSTIC or LIME. Spot the mixture across the loss zone and perform a gentle squeeze (if possible). Do not add directly to active system. Note: A 90 to 120 minute window is required to mix, pump and squeeze. No special equipment is required to pump the pill. Just use the rig pump.

Packaging

HYDRO-PLUG lost circulation material is packaged in 50-lb (22.7-kg) bags