



Pol-E-Flake®

Lost Circulation Material

Description

Pol-E-Flake® is a resilient flaked lost circulation material engineered for cementing operations where partial to severe fluid losses are encountered. Manufactured from durable polyester film, the material offers improved mechanical strength, temperature stability, and resistance to degradation compared with traditional cellophane flakes.

The engineered flake geometry promotes effective mechanical bridging across fractures, vugs, and highly permeable formations, helping reduce slurry losses and maintain cement integrity during placement. The resilient particles conform to irregular loss zones, forming overlapping barriers that support effective sealing and improved placement efficiency.

By helping maintain slurry volume and circulation during cementing operations, Pol-E-Flake® supports reliable zonal isolation while reducing the risk of lost returns and remedial cementing operations.

Advantage

- Pol-E-Flake® provides effective bridging across a wide range of fracture widths due to its engineered flake structure.
- The resilient particles conform to irregular loss zones, enhancing sealing performance during cement placement.
- It is compatible with most cement systems and additives and can be incorporated without specialized blending equipment.
- The product maintains structural stability under elevated downhole temperatures.
- Highly effective at low treatment concentrations, with one sack of Pol-E-Flake® capable of treating a 200-sack cement system in appropriate applications.

Application

- Pol-E-Flake® is used in primary cementing to control partial to severe fluid losses in fractured or vugular formations.
- It is effective in remedial cementing operations where lost returns have compromised zonal isolation.
- The additive may be incorporated into conventional or lightweight cement slurry designs.
- It is suitable for use in wells with naturally fractured, depleted, or highly permeable intervals.

Environmental Advantage

- Pol-E-Flake® reduces cement slurry losses to permeable or fractured formations, minimizing material waste during placement.
- By mitigating lost circulation, it decreases the likelihood of remedial squeeze jobs and repeat cementing operations.
- Improved placement efficiency reduces non-productive time and associated rig operating hours.
- Optimized loss control supports efficient material usage, contributing to a reduced operational footprint.

Treatment Recommendations

- Typical concentrations should be determined based on loss severity, fracture width, and slurry design requirements.
- Laboratory testing is recommended to confirm slurry rheology, thickening time, and compressive strength development prior to field application.
- Pol-E-Flake® can be dry blended or bulk blended to ensure uniform distribution within the cement slurry.
- Monitor returns during placement to evaluate treatment effectiveness and adjust concentration as necessary.

Physical Properties

Appearance: Clear, flaked material

Temperature: Maintains integrity under elevated downhole temperatures

Absolute Density: 10lb/ft³

Compatibility: Suitable for use in conventional and lightweight cement systems.

Grade: 3/8-in grind

Handling and Storage

Pol-E-Flake® should be stored in a dry, well-ventilated area and protected from moisture exposure to maintain product integrity. Packaging should remain sealed until use to prevent contamination, and standard bulk material handling procedures should be followed during blending operations. Personnel should consult the Safety Data Sheet for appropriate personal protective equipment and safety guidance.

Packaging

- Pol-E-Flake® is available in 25 lb bags, 50 bags per pallet.
- The product may also be supplied in bulk bags for larger-volume cementing operations.
- Custom packaging options may be available upon request based on project and logistical requirements.
- Finer and custom grind sizes are available upon request to meet specific operational or blending requirements.



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