

PermaFLO asphaltene solid inhibitors

Providing long term flow assurance and mitigating intervention costs for offshore wells

Applications

Offshore and onshore oil wells

Features and Benefits

- Reduces interventions costs
- Minimizes down time due to asphaltene build up
- Inhibits downhole deposition
- Treats oil before reaching the near wellbore area
- Compatible with common mix waters used in fracturing and stimulation additives
- Facilitates logistics and testing requirements and reduces associated costs

Inhibit downhole deposition

The Baker Hughes **PermaFLO™ asphaltene inhibitors** are proppant like controlled released particles that desorb in a controlled manner from the proppant pack to provide long-term protection against asphaltene deposition. PermaFLO asphaltene treatments minimize the risk of lost production and can significantly delay expensive interventions in deepwater.

Baker Hughes is the only frac vessel supplier in Gulf of Mexico that has a controlled-released solid for asphaltene inhibition designed to be pumped with the frac pack slurry and that has a time release feature, effectively releasing the inhibitor when the well needs it the most. This product provides excellent long-term protection against asphaltene deposition and can reduce the downtime caused by asphaltene

buildup in the near wellbore without conductivity losses at increased loadings. Controlled release provides a cost-effective, long-term flow assurance solution by only allowing a certain amount of chemical to be released for asphaltene control, preserving the rest of inhibitor for subsequent release. The time release feature allows the inhibitor to delivered when the well needs the protection the most.

The PermaFLO family of products can be used as a mixture of various release grades for extended periods of time.

Materials compatibility

Compatibility testing is recommended prior to the job.

Safety and handling

Before handling, storage, or use, review the Safety Data Sheet (SDS) for guidance.

ParaFlo Asphaltene 150 IS typical properties

Sizes available	20/40 and 30/50 mesh
Bottomhole temperatures	Up to 300°F (204°C)
Bulk density	74-78 lbm/ft ³
Specific gravity	2.1-2.4 (30/50) g/cm ³
Closure stress range	Up to 12 kpsi depending on size and loading