

D-SOLVER D

Solid chelating agent

APPLICATIONS

- Filtercake degradation in openhole completions, such as barefoot, standalone screens, expandable screens, and openhole gravel packs
- Perforating pill filtercake dissolution and degradation

ADVANTAGES

- Is compatible with all types of monovalent halide brines
- Adjusts pH from 4.5 to 8.5 with no required HCl acid
- Performs effectively at lower temperatures
- Reduces the risk of postintervention
- Aids aqueous filtercake cleanup

LIMITATIONS

- D-SOLVER D* solid chelating agent should never be used in divalent brines or seawater.
- D-SOLVER D agent must first be formulated in the Tech Service Lab to establish the correct density, pH target, and assure it is precipitant free.
- Encapsulating polymers, lubricants, and nonaqueous shale inhibitors can limit the ability of this agent to attack the calcium carbonate components in water-based filtercake.
- The storage of breakers containing this agent in any type of metal container should be avoided, especially over a long period of time. Plastic containers should be used for storage.

D-SOLVER D agent is a dry material formulated with caustic potash, sodium hydroxide, or citric acid to adjust the pH to a desired target. The primary function of this agent is to complex the calcium carbonate portion of a reservoir drill-in fluid filtercake in a uniform manner. It is used in various openhole completions (such as barefoot, standalone screens, expandable screens, and openhole gravel packs) where filtercake degradation is desired. It also can be used to dissolve and degrade perforating pill filtercakes to complex iron and magnesium present in the wellbore and mitigate emulsions.

D-SOLVER D agent is mixed first with water, followed by caustic potash or sodium hydroxide that is added until the desired pH target is achieved. This solution then can be added to a base brine to increase density, if needed. This pH flexibility enables a more aggressive treatment, especially for injector wells. The addition of ascorbic acid helps enhance the performance of the agent.

The mixing of a breaker system containing the D-SOLVER D agent should occur as soon as possible before it is pumped. Avoid long exposure to metal surfaces while in storage to avoid spending the D-SOLVER D agent. If the breaker system is mixed at a plant or too far in advance, it should be stored and transported in a plastic-lined tank.

Recommended treatment with D-SOLVER D agent is 10% to 25% by weight. The ascorbic acid recommendation is 0.13 lb/bbl (0.37 kg/m³). If an enzyme is added, the recommended treatment is 4% to 5% by volume, and the use of solvents and surfactants is discouraged. All recommended treatments must first be formulated and tested by the Completions Technical Service group.

Toxicity and handling

Bioassay information is available on request. Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the Material Safety Data Sheet (MSDS).

Packaging and storage

D-SOLVER D agent is packaged in 50-lb or 25-kg containers. Keep container closed and store in a well-ventilated area away from sources of heat or ignition. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping, or stacking.

Typical Physical Properties

Physical appearance	Powder
Color	White