

D-Solver HD

D-SOLVER* HD chelant is a dual function product. It can be a main component in the BREAKDOWN* HD breaker system or a supplementary component in the FAZE-OUT*, VERSA/NOVA OUT* breaker systems.

In the BREAKDOWN HD breaker system, D-SOLVER HD dissolves the calcium carbonate components in a water- base filter cake. In the FAZE-OUT and the VERSA/NOVA OUT breaker systems, D-SOLVER HD not only aids in calcium carbonate dissolution, but also mitigates scaling and precipitation of divalent compounds.

Typical Physical Properties

Physical appearance.....	Liquid
Color	Dark amber to clear yellow liquid
Specific Gravity	1.3
pH	3.4 to 3.8

Applications

D-SOLVER HD additive is used in open hole completions such as barefoot, standalone screens, expandable screens, and open hole gravel packs, where filter-cake clean up is desired. It also can be used to clean up perforating pill filter-cakes.

As a primary component in the BREAKDOWN HD breaker system, the main function of D-SOLVER HD chelant is to dissolve the calcium carbonate portion of a water base filter-cake. The secondary role of DSOLVER HD chelant is to complex divalent cations. The BREAKDOWN HD breaker system is recommended when seawater or divalent brines are needed for breaker system density or compatibility. D-SOLVER HD can be used in all type of brines, including seawater, calcium chloride, calcium bromide and zinc bromide where other types of chelants are incompatible. In addition, it can be used in monovalent brines like sodium or potassium chloride or sodium bromide.

Any carrier fluid incorporating the D-SOLVER HD agent should contain at least 20% by volume of free water.

The concentration of D-SOLVER HD chelant in the BREAKDOWN HD system will depend on the type of completion and the estimated amount of calcium carbonate present in the filter cake, but usually is in the range of 10 to 40% by volume.

In breaker systems designed to disperse and dissolve non aqueous filter-cakes such as VERSAPRO†, NOVAPRO†, PARAPRO† and FAZEPRO† reservoir drill in fluid systems, D-SOLVER HD acts as a buffering agent and is used in combination with D-STRUCTOR† and other components in those breaker systems.

The recommended usage is 4 to 6% by volume.

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Advantages

- D-SOLVER HD is compatible with seawater and divalent brines such as calcium chloride, calcium bromide and zinc bromide.
- Can be used in wells where higher densities are required with an upper limit of 14.8 lb/gal (1.77 s. g.)
- Used with D-STRUCTOR in “OUT” and “AWAY” breaker systems to mitigate precipitation.
- Mitigates the precipitation of calcium and other divalent ion bearing scale.
- Slow acting allows the BREAKDOWN HD breaker system to be placed without contributing to immediate losses
- Can be used over a wide range of temperatures. Tested up to 300° F (146 °C)
- Can be placed during completion operation
- Can be mixed with at the rig site with rig equipment
- Eliminates intervention trip
- Helps in the over-all clean-up process of non aqueous filter-cake in the various “OUT” breaker systems.

Limitations

- Encapsulating polymers, lubricants, and non-aqueous shale inhibitors can limit the ability of D-SOLVER HD to attack the calcium carbonate components in water base filter-cake.
- The storage of D-SOLVER HD in any type of metal container should be avoided especially over a period of time. Plastic containers should be used for storage.

Toxicity and Handling

Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the Safety Data Sheet (SDS).

Packaging and Storage

D-SOLVER HD additive is packaged in 1000 L bulk totes and 55 gal (208 L) poly drums. Keep container closed and store in a wellventilated area away from sources of heat or ignition. Follow safe warehousing practices regarding palletizing, banding, shrinkwrapping and/or stacking

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