

VSS (Vulcan Stimulation System) Acid package

Sage productions VSS acid system is designed to be the most effective means of increasing production in problematic Steam Assisted Gravity Drainage style wells. It is formulated to effectively deal with the most common SAG-D well problems, including carbonate deposition, asphaltene deposition, and calcium silicate formation. Sage's VSS acid package contains an organic acid, which becomes very active at the extreme thermal conditions experienced in SAG-D wells. This is combined with a very efficient suite of corrosion inhibitors to ensure no damage is done to downhole tubing or facilities. A strong solvent is emulsified into the acid package in order to penetrate and combat asphalteneic deposition. These treatments are then combined with a strong chelating chemistry designed to deconsolidate calcium silicate problems. Sage's VSS acid package is recommended for all SAG-D or extremely high temperature wells in sandstone formations.



Advantages:

- 1) Excellent dissolving power for carbonate scale and asphaltene deposits
- 2) Effective at deconsolidating silicate scales, especially calcium silicate
- 3) Very effective for wash treatments
- 4) Excellent corrosion profile under a variety of conditions
- 5) Very safe to use with low API gravity reservoir fluids (<22 API)

Limitations:

- 1) Compatibility testing is recommended to ensure no adverse reactions with formation fluids
- 2) Not recommended as a squeeze treatment in poorly consolidated sandstone formation
- 3) May require multiple treatments given well circumstances
- 4) Toxic and corrosive. Please see MSDS should contact occur

Physical characteristics:

Physical State: Liquid
Specific Gravity: 0.95
Titration Percentage: ~ 2% equivalent
Colour: Opaque white l
