

SUPER SOL 10/20/30

STIMULATION

Product Information



Applications

Super Sol Acid is a mixture of hydrochloric acid and organic acid which has approximately the same limestone reacting capacity as an equal volume of 10%, 20% or 30% HCl. The mixtures are designed primarily for use in deep, hot carbonate reservoirs where a high-strength acid is desired but where well conditions may limit its use. Combining these acids provides several other benefits for improvement of acid stimulation treatments.

Features

Increased Carbonate Formation Dissolving Capabilities

Hydrochloric-organic acid mixture dissolves as much limestone as the same amount of hydrochloric acid.

Improved Corrosion Inhibition

At high concentrations, these acids are more easily inhibited than the straight HCl acid equivalents.

Extended Reaction Time

Spending time extended moderately, thus increasing penetration of live acid into carbonate reservoirs.

Compatibility

Compatible with most acid additives.

Benefits

The organic-hydrochloric acid mix, in the presence of the reaction product carbon dioxide, prevents complete reaction of the organic acid with the formation. The small amount of remaining acid maintains a low pH in the spent acid, with two additional benefits: (1) acts as a "built-in" sequestering agent, preventing the precipitation of iron dissolved earlier in the treatment, and (2) minimizes clay swelling.

The mixtures are easily inhibited against corrosion, thus allowing stimulation of deep, hot reservoirs that ordinarily would not be considered for such acid treatments.

Delayed spending time is the main result of the slow ionization of the organic acid phase. Also, the high concentration of hydrogen ions from the hydrochloric acid suppresses ionization of the organic acids. These combined effects create a reserve of hydrogen activity drawn on in the latter stages of the treatment reaction.

Safety Precautions

Super Sol Acid mixtures are corrosive and can ignite and burn. Contact with skin will cause blisters and severe burns. Breathing of vapors causes irritation to the eyes and respiratory system. Wear proper protective clothing (goggles, rubber gloves, etc.) when handling these acids.

Competitive Products

MOD-101, -202 and -303; HTA-71 0; Retarded Acids 8 and 10.

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Technical Data

Super Sol Acid System	Equivalent HCl Strength, (%)	Relative HCl Corrosion Strength, (%)
EQH-101 OrEQH-102	10	7.8
EOH-1 05	10	6.7
EOH-151 OrEQH-152	15	12.3
EOH-1 55	15	10.5
EQH-201 or EQH-202	20	15.8
EOH-205	20	14.0
EQH-301 or EQH-302	30	26.0
EOH-305	30	24.2

References

Confidential Mixing Instructions

MSDS