

SANJEL ACIDIZING

BLEND Pickle Acid
BLEND Organic Acid
BLEND Injection and Disposal Well
BLEND Gelled Acid
BLEND 28% HCl Gas Well
BLEND 15% HCl Solvent-Emulsified
BLEND 15% HCl Oil Well
BLEND 15% HCl Gas Well
BLEND Sour Well Acid

Pickle Acid Blend

Sanjel's Pickle Acid Blend is designed to clean well tubulars and work strings of rust, mill scale, and soluble mineral precipitates prior to acid stimulation treatments. The removal of unwanted iron and mineral scales allows a more effective stimulation of the reservoir. The Pickle Acid Blend contains a surfactant package, to penetrate oil films and waxy deposits. Sanjel's Pickle Acid Blend is recommended prior to all acid treatments.

Organic Acid Blend

Formulated to provide the equivalent carbonate dissolving power of 15% HCl, Sanjel's Organic Acid blend is the system of choice for applications sensitive to HCl acid formulations. The Organic Acid Blend is less corrosive and less reactive than hydrochloric acid and is easily inhibited for high temperature applications or treatments of long duration. The organic acid blend is compatible with carbonate and calcareous sandstone formations and will provide effective results for HCl acid sensitive metallurgies.

Injection and Disposal Well Blend

Sanjel's Injection and Disposal Well Blend is designed to remove common mineral scale and restore permeability. The blend contains a surfactant package to penetrate oil films and wax deposits leaving contacted surfaces water wet. The Injection and Disposal Well Blend is compatible with carbonate and calcareous sandstone formations.

Gelled Acid Blend

Sanjel's gelled acid system is an excellent choice for acid fracturing or matrix acidizing treatments. Stable in HCl concentrations up to 28%, Sanjel's Gelled Acid Blend maintains a uniform viscosity profile at temperatures up to 120°C (248°F). The viscosity of Sanjel's Gelled Acid Blend can be adjusted to provide controlled fluid-loss, retarded acid reaction rates and effective etching characteristics on acid soluble formations for more effective stimulation. The Gelled Acid Blend is also self-diverting at high injection rates and the viscous nature of this blend allows the acid treatment to be redistributed to less permeable or more damaged areas of the reservoir.

28% HCl Gas Well Blend

Sanjel's 28% HCl Gas Well Blend has been developed specifically for stimulating gas or gas/condensate-producing reservoirs. Formulated with a proprietary demulsifier/antisludging agent, corrosion inhibitor, and foaming dispersant, this blend provides reliable and economic emulsion breaks, sludge control, corrosion protection, and rapid well cleanup. Sanjel's 28% HCl Gas Well Blend significantly reduces the potential for increased water saturation by reducing the volume of acid, mix water, and time required to effectively stimulate these formations. It is also specifically formulated for rapid flow back and well cleanup. The Gas Well Blend is compatible with carbonate and calcareous sandstone formations and will provide cost effective results in matrix or fracture acidizing applications.

15% HCl Solvent-Emulsified Blend

Sanjel's 15% HCl Solvent-Emulsified acid blend is an extremely versatile, multi-purpose system suitable for many applications. This blend is an excellent choice when significant organic damage is encountered and is ideal for stimulating tight, low permeability formations where injection rates are restricted. The slower overall reaction rate of this blend can be adjusted to provide effective fluid-loss control, which allows for deeper acid penetration into the formation compared to conventional 15% HCl acid systems.

15% HCl Oil Well Blend

Sanjel's 15% HCl Oil Well Blend is a highly effective and versatile acid system in either wash-and-squeeze or matrix acidizing applications, combining non-sludging capabilities with fast and complete emulsion breaks. The 15% HCl Oil Well Blend is compatible with carbonate and calcareous sandstone formations. Sanjel's Stimsol 200 may be used with Sanjel's 15% HCl Oil Well Blend to control wax and asphaltenes.

15% HCl Gas Well Blend

Sanjel's 15% HCl Gas Well Blend has been developed specifically for stimulating gas or gas/condensate-producing reservoirs with normal irreducible water saturations. Formulated with a proprietary demulsifier/anti-sludging agent, corrosion inhibitor, and foaming dispersant, this blend provides reliable and economic emulsion breaks, sludge control, corrosion protection, and rapid well cleanup.

Sour Well Acid Blends

Acidizing in sour wells offers additional challenges beyond those experienced with acidizing in sweet environments. These include the prevention of iron sulfide precipitates during the spending and flow back of the treatment acid. The addition of a weak acid keeps the pH below the threshold where the precipitation of unwanted iron sulfide may occur. The base acid package will be dependent on the formation being stimulated. Using coiled tubing under sour conditions exposes the steel to sulfide stress cracking corrosion and the risk of catastrophic failure. To inhibit sulfide stress cracking corrosion, the exposed coiled tubing string is coated with Sanjel's SSCI additive as it is run in the hole.