

## HT Visco Elastic Surfactant SL-SurVis04

### Product Description

Fluid and petrol-physical heterogeneities are encountered in most sandstone and carbonate formations. Chemical diverter technology is one of the methodologies to be used in stimulation treatment to divert treatment fluids from high water cut layers to low water cut layers, and/or from high permeability zones to low permeability zones.

SL-SurVis04 is a surfactant-based gelling agent for hydrochloric (HCl) acid that thickens the fluid by forming a viscoelastic gel to divert live acid in the formation. The viscosity and degree of viscoelasticity gained is dependent on the surfactant concentration, strength of acid, and temperature.

### Technical & Engineering Information

SL-SurVis04 is a betaine-type zwitterionic surfactant, which is a polymer-free, surfactant-based pickling agent. In the presence of calcium and magnesium ions, they can curl into worm-like micelles to thicken acid or fracturing fluid. Thickens fluids by forming a viscoelastic gel to transfer active acids in the formation. The degree of viscosity and viscoelasticity obtained depends on surfactant concentration, acid strength and temperature.

SL-SurVis04 is added to 20% HCl acid to create a diverting acid system. It is a simple system, in situ acid gelling system provides low viscosity while being pumped resulting in reduced friction pressure, but viscosity quickly develops in situ as acid spends allowing self-diversion of the following treatment fluids.

SL-SurVis04 water wets formation causes no or minimal formation damage and cleans up with production. It can also be foamed with Nitrogen.

SL-SurVis04 has good high temperature resistance, can be used for production increase measures up to 250°F.

### Technical Indicators

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Item	Indicator
Appearance	Uniform Liquid
Colors	Light Yellow to Light Brown
Density, (20°C)	0.9-1.1g/cm <sup>3</sup>
PH	6-9
Solubility	Soluble in water & HCL

### Recommended Treatment

SL-SurVis04 is normally added to 20% HCl acid with additives at concentrations from 4 to 8% by volume. A premise of at least 20 minutes is recommended to ensure complete mixing.

General concentration is 20-80 gal / 1000 gal of fluid depending on the required viscosity, HCl acid strength and mixing method (batch mix or on the fly).

### Packing and Storage

SL-SurVis04 be packed in 200L HDPE or 1000L IBC.

Be kept away from moisture and possible damage of the packages in transportation, stored in cool place and away from direct sunlight.

Shelf life: 1 year.

<http://www.stimulationchem.com/>

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