

# Acid additives

## PROBLEM

Today, acidizing is one of the most widely used and effective means available to oil and gas operators for improving productivity of wells. Acidizing is commonly performed on new wells to maximize their initial productivity and on aging wells to restore productivity and maximize the recovery of production fluids. Depending on well conditions, formation characteristics and fluid types, some additives must be considered. Many acid additives are available but those that are usually necessary are corrosion inhibitors, intensifiers, iron control agents, non-emulsifiers, anti-sludge additives, acid retarders, foaming agents and mutual solvents.

## SOLUTION

Our broad portfolio of specialty chemicals are designed to support and enhance your stimulation fluid systems for both continuous and batch-mix operations. In addition to standard and custom-formulated chemicals, our experts are available to help you on designing your stimulation system in function of your needs. If you're working with formation skin damage, paraffin, asphaltene or any inorganic deposition in the near wellbore, Alxa Specialty has the expertise to help you solve these problems.

## 1 ACID CORROSION INHIBITORS

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<b>LX-2006</b>	Broad-temperature for organic acid packages (formic acid, acetic acid)
<b>LX-2008</b>	Low Temperature range for HCl & HCl-HF acid packages.
<b>LX-2024</b>	Mid & High-Temperature range for HCl & HCl-HF acid packages.
<b>LX-2028</b>	Mid & High-Temperature range for HCl & HCl-HF acid packages.

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## 2 INTENSIFIERS

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<b>LX-2110</b>	Intensifier for acid packages. Increase effectiveness of corrosion inhibitors at >120 °C.
<b>LX-2120</b>	Intensifier for acid packages. Reduces pitting tendency at high temperatures.
<b>LX-2130</b>	Intensifier for acid packages. Increase effectiveness of corrosion inhibitors at >150 °C.

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### 3 IRON CONTROL AGENTS

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<b>LX-2200</b>	Liquid Iron-Reducing control agent. Performing in both live- and spent-acid conditions. Performance up to 28% vol HCl.
<b>LX-2220</b>	Dry Iron-Sequestering control agent. Performing in spent-acid conditions. Effective in all types of acid. Effective up to 95 °C.
<b>LX-2250</b>	Liquid Iron-Sequestering control agent. Performing in spent-acid conditions. Only used in HCl systems, avoid HF ones. Effective up to 180 °C.
<b>LX-2280</b>	Dry Iron-Reducing control agent. Performing in spent-acid conditions. Secondary function as oxygen remover. Effective at >150°C.

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### 4 NON-EMULSIFIERS

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<b>LX-2310 to LX-2360</b>	Liquid Non-ionic non-emulsifier range.
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### 5 ANTI-SLUDGE

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<b>LX-2430</b>	Cationic anti-sludge additive. Prevents asphaltene stabilized emulsions in HCl systems. Compatible with most acid corrosion inhibitors.
<b>LX-2450</b>	Anionic anti-sludge additive. Prevents asphaltene stabilized emulsions in HCl systems.
<b>LX-2460</b>	Non-Ionic anti-sludge additive. Prevents asphaltene stabilized emulsions in HCl systems.

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## 6 MUTUAL SOLVENTS

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<b>LX-2710</b>	Multifunctional solvent to promote water-wet surfaces. Miscible in both acid systems and hydrocarbon solvent systems. Effective up to 178 °C.
<b>LX-2720</b>	Non-ionic solvent package. Removes oil-coating promoting water-wet surface. Miscibility limit 20% by volume of 15% active HCl.
<b>LX-2730</b>	Non-ionic solvent package. Removes oil-coating promoting water-wet surface. Miscibility limit 65% by volume of 15% active HCl.
<b>LX-2740</b>	Non-ionic solvent package. Removes oil-coating promoting water-wet surface. Miscibility limit 50% by volume of 15% active HCl.

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## 7 MISCELLANEOUS

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<b>LX-1070</b>	Acidizing Micellar Solvent. Multipurpose cleaning agent enabling a more concentrated acid to react on the formation.
<b>LX-1180</b>	Organic deposit remover. Multipurpose high-flash point to dissolve asphaltenes and paraffines.
<b>LX-1359</b>	H <sub>2</sub> S Scavenger Triazine-based product effective in reducing and controlling the H <sub>2</sub> S levels
<b>LX-2340</b>	Non-ionic Surfactant. Blend of surfactants that provides strong water-wetting properties and interfacial tension reduction.
<b>LX-2500</b>	Emulsifier agent to delay acid reaction. It will work with diesel, kerosene, crude oil or mineral oil.
<b>LX-2558</b>	Acid Gelling Agent. It viscosifies HCl acid for use as a gelled acid or as the main component of a cross-linked acid system.
<b>LX-2581</b>	Visco-Elastic Surfactant (VES). Surfactant-based gelling agent for hydrochloric (HCl).
<b>LX-2630</b>	Cationic surfactant. Used in foam fracturing, foam acidizing & air-foam drilling operations.
<b>LX-2650</b>	Amphoteric Foaming Agent. Primary uses are foam fracturing, foam acidizing and removal of fines in post-treatment fluids.
<b>LX-2670</b>	Anionic Foaming Agent. Primary uses are foam fracturing, foam acidizing and removal of fines in post-treatment fluids.
<b>LX-4500</b>	Temporary Clay Control Agent.

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