#### **Pressure Pumping**



Reservoir Stimulation Fluids

#### Anti-Sludge Agents

# WAS-402LA Antisludge Agent

WAS-402LA is an acid-soluble, anionic antisludge agent that prevents the formation of asphaltenic and paraffinic sludge and emulsions when treating with strong mineral-acid systems. WAS-402LA is effective in a wide variety of crude oils. It can be easily blended into the acid package, and it remains stable for extended periods.

### **Applications**

- Excellent broad-range use in acidizing stimulation fluids
- Effective in oil-well stimulation fluids to prevent sludging tendency
- Crude oils with high sludging tendency
- For use with hydrochloric acid concentrations up to 28%
- Effective up to at least 300°F (150°C)

### Usage

- The normal concentration range is from 5 to 25 gal/1,000 gal (5 to 25 L/m<sup>3</sup>), depending on the sludging properties of the crude oil and the acid concentration.
- WAS-402LA is anionic; therefore, it should not be premixed with acid blends containing cationic corrosion inhibitors.
- An on-site bottle test is typically required to select the most cost-efficient product usage.

## Safety Notices

- Consult the MSDS, safety posters, and/or product label before use, and use personal protective equipment as advised.
- Observe standard precautions when handling this and all other organic chemicals.

#### **Advantages**

- Provides compatibility with a wide range of acid-package
- additives, including cationic corrosion inhibitors
- Effectively retards the formation of paraffin and asphaltenic sludges
- Offers solubility and stability in strong mineral acids, e.g., hydrochloric acid
- Enhances flowback and enables rapid return of treating fluid by preventing sludges and emulsions that restrict permeability

### **Typical Physical Properties**

Appearance	Light amber liquid
Specific gravity	0.92 to 1.02
Flash point (°F, °C)	166 74
Packaging	55-gal (208-L) drum 330-gal (1,249-L) tote

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