

Stimulation Fluids

Corrosion Control

WAI-251LC

High-Temperature, Acid-Corrosion Inhibitor

Weatherford's WAI-251LC contains a quinoline-quaternary surfactant, a synergistic blend of an acetylenic alcohol replacement, solvents in a highly effective dispersion package that inhibits corrosion in all hydrochloric (HCI) and HCI-hydrofluoric (HCI-HF) acid systems up to 350°F (177°C).

Applications

- Provides effective corrosion protection in all HCl and HCl-HF blends up to 350°F (177°C)
- Upper temperature limit can be increased by use of inhibitor intensifiers

Usage

- The recommended concentration range is
 1 to 20 gal/1,000 gal (1 to 20 L/m³) of the total acid blend.
- Concentration depends on acid type and strength, bottomhole temperature, contact time, and additional additives used.
- By adding WAI-251LC with the water during the loading operation, the product can be better dispersed in the resultant acid solution.

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

- Contains no propargyl alcohol and has a high flash point, making the product nonhazardous for transportation purposes
- Disperses well in acid solutions, resulting in good inhibitor distribution and pipe protection
- Provides acid-corrosion protection for as long as 24 hours
- Compatible with intensifiers such as organic acids, metal halides, and antimony compounds for higher temperatures

Typical Physical Properties

Appearance	Dark red/purple liquid
Specific gravity	1.04 to 1.07
Density (lb/gal, kg/L)	8.67 to 8.92 1.04 to 1.07
Ionic charge	Cationic
pH (neat)	2.0 to 3.5
Aqueous solubility	Miscible
Flash point (°F/°C)	185 <i>85</i>
Freezing point (°F/°C)	-22 -30
Packaging	485-lb (<i>220-kg</i>) drum

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