**HAI-OS™ Acid Inhibitor**

Provides corrosion protection and meets environmental requirements in both standard and weighted acid systems.

HAI-OS™ inhibitor is an environmentally friendly acid corrosion inhibitor applicable to a broad range of temperatures, acid mixtures, and mixing fluids. It provides exceptional performance in both standard and weighted acids. Weighted acids are often required in horizontal screened sections during mud filter-cake cleanup or for wellhead pressure control.

HAI-OS inhibitor offers several important benefits:

- More environmentally acceptable.
- Ecotested according to OSPARCOM and EPA guidelines.
- Can be intensified with Halliburton’s patented, environmentally friendly HII-124B/HII-124F™ intensifier combination or HII-500M™ intensifier.
- Applicable in certain acid systems up to 180°C (350°F) (see Figures 1, 2, and 3).
- Effective on various alloys including N-80, 13Cr, 316L and Incoloy† 825.
- Provides excellent solubility in CaCl₂, CaBr₂, and ZnBr₂ brine-acid systems with densities ranging from 10.0 lb/gal to 16.6 lb/gal over a broad temperature range.

**Required performance plus environmental friendliness**

Halliburton is committed to continuous improvements in chemical compliance. Reducing the environmental impact of chemicals has been balanced with tough performance requirements including the move toward HPHT operations.

For completion and stimulation operations, significant research effort has been focused on developing and using environmentally friendly chemicals. Acidizing operations have presented a difficult challenge, especially in the area of acid corrosion inhibitors. It is an almost impossible requirement that a product function in a harsh environment such as 28% HCl acid at 150°C (300°F) and, at the same time, be readily biodegradable in a marine environment. HAI-OS inhibitor is a significant step toward meeting these requirements.

HAI-OS does not contain environmentally unacceptable substances such as ethyl octynol, naphtha, and quaternary ammonium compounds. It has been classed in the UK as an (O)CNS Group C chemical. For health and safety labeling, HAI-OS inhibitor should be labeled toxic and flammable.

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Figure 3 - HAI-OS provided good corrosion loss control for N-80 in 28% HCl at 225°F and 250°F by adjusting the amount of HAI-OS and including HII-124B/HII-124F inhibitor intensifier.

For more information on the HAI-OS™ acid inhibitor, please call your local Halliburton representative or email us at stimulation@halliburton.com.