



Soy-Based Corrosion Inhibitor

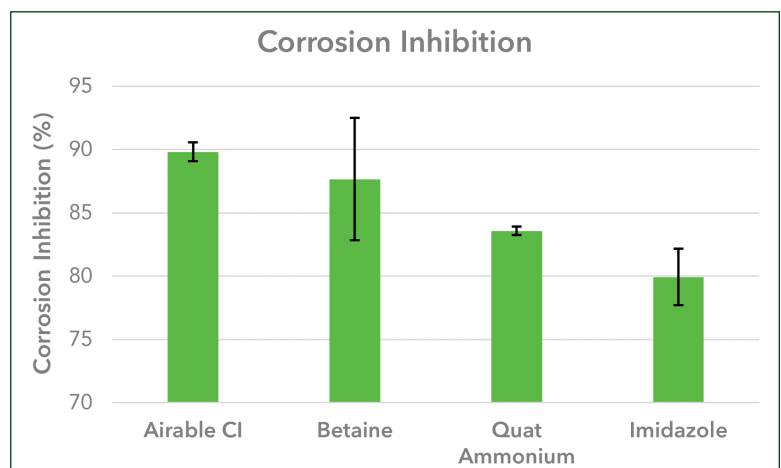
Airable Research Lab has developed a soy-based additive that inhibits corrosion in water-based systems. Corrosion inhibitors are chemicals that prevent or slow the corrosion or leeching of metals, in particular iron and copper and alloys made from said metals. Low pH, oxygen from the air, and dissolved salts can all cause metals that are in contact with water to corrode. As a result, metal equipment or materials such as casings, valves, pipes, and pumps may deteriorate. Corrosion inhibitors are therefore necessary across industries, from manufacturing to construction. The nature of the corrosive inhibitor depends on the material being protected. The Airable product targets ferrous metals that can be found in oil-producing wellbores, water systems involving cooling tower evaporators, heating systems, and steam generators.

THE TECHNOLOGY

Airable's corrosion inhibitor is based off modified epoxidized soy methyl ester. These modifications impart water solubility to the compound. The resulting product is a mixed-type corrosion inhibitor that suppresses the anodic and cathodic reactions that lead to corrosion. Airable's corrosion inhibitor contains 54% soy content, and in-house studies have demonstrated excellent corrosion protection.

HIGHLIGHTS

- Bio-based formulation with 54% soy content
- Domestic feedstocks
- Up to 89% corrosion inhibition in in-house studies
- Highly miscible with water



Airable tested its corrosion inhibitor and commonly used commercial corrosion technologies on carbon steel plates immersed in 1% HCl solution. The soy-based product showed comparable performance.