

Nufarm Inhibitors for Caustic Towers

Acidic gases are created during the thermal cracking of steam-cracker feedstocks. The preferred choice for removing these acid gases from the cracked gas is by absorption using dilute caustic soda. The Caustic Tower is designed to remove these acid gases.

In addition to acid gases, oxygenated compounds, including carbonyl compounds such as aldehydes, are formed in the furnaces.

Most of these carbonyl compounds are absorbed into the caustic solution and in the conditions found in the column will undergo aldol condensation. The aldol condensation reaction products have a characteristically orange to red colour.

As the reactions progress, the colour will intensify and an oily, viscous hydrocarbon liquid phase is produced. If left unchecked, an aldehyde resin material is formed. This is fouling material that forms sticky deposits found in many caustic systems.

Nufarm have an industry approved treatment, Inhibitor AHM E830, for the prevention of aldol polymer in the caustic tower. We can also supply free radical inhibitors to prevent monomers polymerizing in this tower.

The effect of Nufarm's inhibitor E830 for red oil is shown below. Increasing amounts of inhibitor from left to right show the prevention of aldol polymer.

