

# CITRIC ACID

## ALKALINITY CONTROLLER

Citric Acid is often incorporated into acid formulations. Its function is to prevent the precipitation of gelatinous ferric hydroxide as the acid spends.

As a sequestering agent, citric acid can hold as much as 3000 mg/L of ferric iron in spent acid solutions for more than 4 hours at temperatures above 80°C.

Citric Acid is one of the most economical iron sequestering agents available. However, it should not be used at concentrations greater than 2 kg/m<sup>3</sup> as it can precipitate calcium nitrate if there is insufficient iron for it to sequester.

As a cementing additive, Citric Acid can be used as a retarder as well as cement dispersant. It is normally used at between 0.1% and 0.3% by weight of cement. Citric Acid can also be used in a wide range of applications where the pH of aqueous fluids has to be lowered.

## MIXING & HANDLING

Although Citric Acid is of low hazard and toxicity, excess exposure to dust should be avoided to prevent irritation to the eyes, skin and respiratory tract

As with all organic material, caution is advised when storing or handling near strong oxidizing agents, alkali metals or strong bases. For further handling and safety instructions consult Safety Data Sheet.

WHMIS: Controlled (see SDS)

TDG: Not regulated

Packaging: 25 kg bags

## PHYSICAL PROPERTIES:

Appearance: Colorless and odourless grains

Specific Gravity: 1.65

Molecular Weight: 192.14

Molecular Formula:  $\text{HOC}(\text{CH}_2\text{CO}_2\text{H})_2\text{CO}_2\text{H}$

Melting Point: 153°C

## CHEMICAL PROPERTIES:

Type: Anhydrous crystals

Solubility: 60% @ 20°C (162 gms/100mLs of H<sub>2</sub>O)

pH 0.1 N solution: 2.2 approx.

