

# Technical Data Sheet

CitcoWater.com



CHEMICAL  
SOLUTIONS

# CLARIUS

## Clarus

### Patented Water Treatment Technology - 10,011,508

CITCO Water is committed to innovating new technology to enhance drinking water quality from the water treatment facility to the household. In our research facility, three major functions were studied with respect to water treatment: corrosion control, cleaning, and sequestration.

In the past, these functions were conducted with one type of chemistry: phosphates. Restrictions are growing tighter each day on the discharge limits of phosphorus for wastewater treatment facilities. With that in mind, CITCO Water has developed a chemistry with lowered phosphate concentration.

It is assumed that corrosion control in a water distribution line occurs at day one when feeding a product. However, corrosion control of a pipe can only occur once the scaling and buildup has been removed from the pipe wall. Once the pipe surface is exposed, corrosion control can occur. On a newly installed line, corrosion control can occur at day one. Cleaning occurs immediately and is the easiest function of phosphate products. CITCO Water analyzed the function and the end product of cleaning. It was found that all chemistry relies on extensive flushing of the water distribution system due to poor water quality from cleaning. This shows two things; the cleaning process is occurring and sequestration is very inefficient.

Sequestration in the water treatment industry is misunderstood. Sequestration occurs when sequestrants form soluble complexes and inactivate the cations from re-precipitating or re-scaling. When water lines are cleaned, the end result is a large amount of black, red, or white precipitants that require maximum flushing. If a product is cleaning properly, one should expect it to also sequester properly as well. Clarus will control corrosion and clean the water distribution line by removing scale, tuberculation, and biofilm. However, when developing Clarus, CITCO Water focused on the sequestration of the heavy metals and soft metals such as iron, manganese, calcium, and magnesium and maintain a complete solubility of removed material.

Clarus has separated itself from other general chemistry with increased temperature and pH stability. Research and development has shown Clarus to clean, control corrosion, and sequester at temperatures over 250°F and pH levels as low as 4.6.



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## Specifications

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<b>Components</b>	Certified to NSF/ANSI/CAN 60
<b>Appearance</b>	Clarus Dry - white powder, Clarus L - clear liquid
<b>Product Concentration</b>	Clarus Dry - 100% by weight, Clarus L = 35% by weight
<b>Density</b>	11.4 lbs. per gallon
<b>pH of 1% Solution</b>	5.07
<b>Scale/Corrosion Removal Range</b>	varies with feed rate
<b>pH Operating Range</b>	4.6 - 9
<b>Solvency In Water</b>	Infinite
<b>Certification</b>	NSF, Standard 60, Approved
<b>Temp. Stability Range</b>	-25°F to above 250°F



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