

# HCT Water Well Solutions

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## Introduction

Let's get off on the right foot, as they say! Two foundational principals: 1) Prescription without diagnosis is mal-practice. 2) Don't guess, test!

Did you know: More than 90% of water wells fail at 14 years of age - more than 90% of water wells fail because of biological colonization, not scale – most any well will fail prematurely when it is turned off and left to stagnate without any consideration of layup chemistry to deter biological colonization (turn you pool off and watch what happens) – that pouring chlorine down the well or acid is actually one of the worst things you can do – that chlorine tablets are insoluble in the lower zones of your well – that bot chlorine and acid will damage steel alloy casings – that acids are ineffective against bacteria, biocides are ineffective descalers, chlorine is a disinfectant and a biocide is not chlorine, it is a biocide – that some product names end in cide and have NO biocidal efficacy – that jetting can push living bacteria into the filter pack – that sonar does not break down biology and is ineffective in deeper zones of wells – that some acids are food source for bacteria, some acids work faster than others and remove 2 to 3 times the amount of scale – that 2 cleanings at 50% product concentration is significantly better than 1 cleaning at 100% product concentration – the stronger the acid the less chemical retention time, biocides take 72 hours to complete their reactions – if you acidify and don't re-pickle/passivate the steel alloy, the well will get sicker much sooner an you'll probably battle iron issues continuously – layup chemistry is as easy as flooding the well with soda water – before treating the well, did we look at the gradient water flow so if we put chemistry in the well, will it stay there – the addition of 10 lbs per gallon chemistry to 8.345 lbs per gallon water in 20-30 ft. of water well casing will become part of that water, and not end up in the bottom section of the well of which the bottom section is not usually where the colonizing bacteria proliferate. And there is more . . .



All HCT Well-Klean® products are accredited by the National Sanitation Foundation, which includes UL, Canadian Standards Council and the American Standards Testing Methods. This is a certification for use “on” potable water system with requirements, of which for HCT contain off-line use (not a potable water additive for human consumption) and a minimum amount rinsing / flushing.

## Well-KLEAN® PRE-BLEND

Descaler - Perhaps the most concentrated and fastest acting, organically inhibited, catalyzed acid solution available in the market today for the removal of mineral scale and metal oxides. Safe for handling yet extremely fummy. Mineral scales dissolve within 12 hours, oxide metals dissolve over a 72-hour soak time. Safe to leave downhole for days. Where other products are specified, it usually takes ½ the amount of product to do twice the work in ½ the time – it's all about the chemistry and the concentration, why ship water across the country.

Removes silicate scale. Environmentally safe. When properly neutralized, effluent is almost always beneficial for disposal to soils, pond and lakes. Well-Klean® Pre-blend contains all the necessary components necessary for optimum and effective descaling when subscribing to HCT's Best Practices. Ideal for use in removing scale on heat exchangers. Additional Well-Klean® Concentrate is advise where increased corrosion protection is desired – steel wire wrap well casing, tube and shell heat exchangers. Nothing that removes scale will not compromise galvanization to some degree.

Available in 5 gl. poly pails, 55 gl. Poly drums and 265 gl. IBC containers

# WaterSOLV™ BC

Bioremediation Solution - When the analytical data shows 90% percent of wells are not scaled, but colonized by bacteria, it was time to develop a bioremediation solution. After years of work and research, evaluating just about every option available on the planet for viable efficacy and performance, this organically inhibited, catalyzed, hydrogen peroxide solution proved to be the best available technology, perhaps only outdone by steam.

As concentrated as possible, WaterSOLV™ BC, at prescribed use rates and soak time, breaks down the biofilms produced by bacteria while destroying the bacteria DNA. The more cleaning, the longer lasting. After use, no neutralization is necessary. Classified as non-corrosive. Special use considerations are always in play; amount of product, rate of application, soak times, and number of applications. WaterSOLV™ BC is environmentally safe and properly diluted, the effluent is usually beneficial for soils, including vegetation, ponds and lakes. Use rates usually range from 4 to as much as 10% and potentially multiple applications. Soak times are usually prescribed at 72 hours.

This is a very concentrated product which makes it also very important to understand its potential handling, storage and use requirements. Users are required by HCT to be certified for its use, handling and storage, spill and leak, also with its use in constrained piping systems.

Available in 5 gl. poly pails, 53 gl. Poly drums and 2-part 305 gl. IBC containers

# Well-KLEAN® CONCENTRATE

The proprietary base chemistry, making powerful chemicals like muriatic acid and hydrogen peroxide safer, less corrosive, yet more effective. Operates also as the corrosion inhibitor, surfactant, and sequestering agents. Utilized where additional corrosion protection from acid is necessary, usually where there are compromised casings or wire wrap steel casings. Also suppresses downhole reactions.

Available in 5 gl. poly pails, 55 gl. Poly drums and 265 gl. IBC containers

## The Processes

1. Information Gathering – Assessment – Estimate.
2. Downhole video – confirmation / adjustment of Estimate, Defined Scope of Work (Processes and Procedures).
3. Scope of Work let for bid to contractors by municipality or well owner.



### **Vegetation vitality through soil by water treatment.**

Well-Klean®, WaterSOLV™, Water Treatment for Agronomy™, Water SOLV™ pHix & WaterSOLV™ Grow are trade names of HCT, LLC

Prescription without diagnosis is malpractice. HIS plan is always perfect and we choose to follow HIS lead. We are always open to testing things we have not already invested significant resources to know.