

Introducing Greensand Plus!

"This ain't your daddy's Greensand!"

What's the big deal?

By Chris Lasiter

I know you've heard it before, "New revolutionary media to change the world!" Well, how about, an old media... improved?

A few years ago we started testing a new media with a familiar name. Like most filter manufacturers, we were very acquainted with the old Manganese Greensand and its short comings, so we were not expecting much from this "New" version of an old product. Nevertheless, we started testing the Greensand Plus in several applications where we could keep tabs on its performance. We then applied the Greensand Plus in an area around Milner, GA where several filter companies, ours included, have experienced a type of water that is very difficult to treat. To our surprise, the media worked without problems in an area infamous for difficult water. We also tried the media on another difficult application near Colbert, GA -bingo! Problems cured!!! We were ecstatic!

In early fall last year one of the developers of the Greensand Plus, who we have known personally for 20 years, gave insight into the true history and capabilities of this new media. One of the most surprising "secrets" he revealed was that the dreaded potassium permanganate was no longer necessary. In fact, the media actually works better using chlorine as a regenerant - no more purple water!!!! (Read more about the media's true capabilities in other parts of this news letter.)

I, for one, was *not* initially convinced that chlorine would work in place of potassium permanganate (ask Billy about our debates over this issue). I became a true believer once we applied the Greensand Plus with chlorine to several challenging installations. Amazingly, *the Greensand Plus has worked perfectly in applications where other medias have not!!*

It has been over a year since we started testing the new Greensand Plus and nine months since we changed from potassium permanganate to chlorine. *We have had less problems with this media than any that we have used in the past.*

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Getting to know Greensand Plus Playing "Truth or Myth?"

Truth or Myth? Greensand Plus is just a repackaged version of Manganese Greensand.

Myth! Greensand Plus is a brand new media that was built from the ground up. It took over three years to develop and is not even manufactured in the same country as Manganese Greensand. In fact, Manganese Greensand is mined from the soil in New Jersey. Greensand Plus is manufactured in Brazil. *The only thing the two medias have in common is the name!*

Truth or Myth? Greensand Plus can be regenerated with regular chlorine tablets rather than potassium permanganate.

True!!! Believe it or not, Greensand Plus works better with chlorine than Pot Perm. Chlorine helps to keep the new Greensand Plus clean and "excites" the catalytic surface, helping it perform better. On the other hand, the old Manganese Greensand required potassium permanganate to recoat its catalytic surface.

Truth or Myth? Since the older Manganese Greensand is easily fouled when the customer forgets to recharge the system with potassium permanganate, the new Greensand Plus must behave the same way if the feeder tank runs out of chlorine.

Myth!! The catalytic surface is permanently fused to the silica core of the Greensand Plus and does not have to be replenished or recoated. Depriving the Greensand Plus of chlorine will not hurt the media or its catalytic surface. Think of Greensand Plus as a lighter, cheaper version of Catalox. The chlorine backwash greatly enhances the performance of the media bed.



Truth or Myth? pH is as important to Greensand Plus as it is with Catalox media.

Myth!!! Even though the manufacturers of both medias give a similar pH range on their specifications, we have found through our experience that *Greensand Plus is much less sensitive to pH than Catalox*. In fact, we will only quote a separate neutralizer if the customer's pH is below 6.5.

Truth or Myth? The old Manganese Greensand broke down easily and had a short lifespan so the new Greensand Plus could not be any better.

Myth!!! Greensand Plus is a much stronger and durable media than the old Manganese Greensand. Greensand Plus has a silica base that is crush resistant and will not soften in water that is low in TDS and hardness. Moreover, the catalytic surface is permanently fused to the silica core and cannot be removed. Its lifespan is around eight years. In contrast, the old Manganese Greensand has a clay-type material as its base. This clay base would crush into fines when pressure differentials reached 10 psi. or soften when used in low TDS soft water. Not a problem with Greensand Plus!!!

Comparing Greensand Plus and Catalox

Greensand Plus

Density: 85 Lbs per Cu. Ft.
Minimum pH* : 6.5

Service Flow Rates:

10x54": 2.7 - 5 gpm

12x48": 4 - 7 gpm

13x54": 4.6 - 8 gpm

Backwash Rates:

10x54" - 5 gpm

12x48" - 7 gpm

13x54" - 10 gpm

*Based on experience

Catalox clearly has an advantage with higher service flow rates, *BUT* its backwash requirements demand a large flow rate of water -making it hard to use on applications with average to lower flow rates.

On the other hand, Greensand Plus can be used on almost all residential wells and its backwash requirements allow greater flexibility. Larger tanks can be used on applications with higher levels of iron & manganese - without demanding an exorbitant amount of water to backwash the system.

Catalox

Density: 125 Lbs per Cu. Ft.
Minimum pH*: 7.0
(7.2 and higher preferred)

Service Flow Rates:

10x54": 8-10 gpm

12x48": 12-15 gpm

13x54": 15-18 gpm

Backwash Rates:

10x54" - 12 gpm

12x48" - 15 gpm

13x54" - 20 gpm



- ✓ **Easier to backwash**
- ✓ **Flexible bed sizing**
- ✓ **Uses chlorine tablets - No more potassium permanganate!**
- ✓ **Wider realistic pH range**
- ✓ **No need to precondition the media prior to use**
- ✓ **Removes up to 4 ppm of Hydrogen Sulfide odor**
- ✓ **Also treats for radium and arsenic**

What's the big deal? continued...

The advantages of the Greensand Plus are amazing!:

- it is easy to backwash (5-7 gpm for 10x54")
- less expensive than Catalox
- not pH sensitive (6.5 to 8.5)
- removes up to 4 ppm of sulfur

Additionally, it does not have the weaknesses of the old Manganese Greensand. For instance, if the customer forgets to keep up with the potassium permanganate, the older Manganese Greensand would many times become irreversibly fouled, requiring an expensive rebed. This is not a concern with the new Greensand Plus!

In fact, this month I got a call from one of our dealers in West Georgia. Their customer has a Greensand Plus filter that was installed in April, 2006. The customer was concerned because the "pot perm" level in the tank has remained unchanged since the installation a year ago. (This was before we changed to chlorine) Come to find out, the brine cycle in the digital WS1 valve programming was turned to "off". The filter had not drawn brine at all since installation. The shocking part of this story is that the current Treated iron level is 0.09 ppm and the manganese level is 0.021 ppm!!! The original untreated sample had an iron level of 1.70 ppm and a manganese level of 0.260 ppm!!! The Greensand Plus filter is working.... Even without using pot perm or chlorine!

Needless to say, I am very excited about our Greensand Plus filters. We have had virtually no callbacks and no issues with the system.

There are other technologies in the pipeline that are going to be just as revolutionary as Greensand Plus. As they come to market, we'll let you know! Stay tuned... things are getting better and better!

Truth or Myth? Greensand Plus is by far the best media on the market for the reduction of iron, manganese and hydrogen sulfide.

True!!! Greensand Plus is lighter than Catalox and requires only half the water for a thorough backwash. Since a lot of water is not needed to backwash the Greensand Plus, a larger system can be used in applications with really bad iron and manganese. Since the required backwash flow rate of the media is much less than Catalox, a 13x54" system can be used on a 12 gpm well system instead of a much smaller 10x54" Catalox system -for about the same cost! (Remember, the service flow rate of Greensand Plus is slightly less than Catalox.) Additionally, Greensand Plus can treat up to 4-5 ppm of hydrogen sulfide odor.

Truth or Myth? Greensand Plus is an exact replacement for Manganese Greensand and older Greensand filters can be rebedded with the new Greensand Plus media without changing equipment or settings.

True! Greensand Plus has the same

effective size, uniformity coefficient, density, weight, capacity, backwash and pressure drop curve. Also, Greensand Plus requires the exact same backwash rate as Manganese Greensand so no changes need to be made when rebedding older filters. But also keep in mind, the service rate of the Greensand Plus actually exceeds that of the older Manganese Greensand media so newer systems will perform much more efficiently. Also, The Greensand Plus works better with chlorine so potassium permanganate does not have to be used. No more purple water!!!

For more information on Greensand Plus, go to <http://www.filtertechofgeorgia.com> or email us: info@filtertechofgeorgia.net



www.filtertechofgeorgia.com