



RINK SEAL  **PRO**TM

www.rinksealpro.com

 **SHALER**[®]
Since 1904

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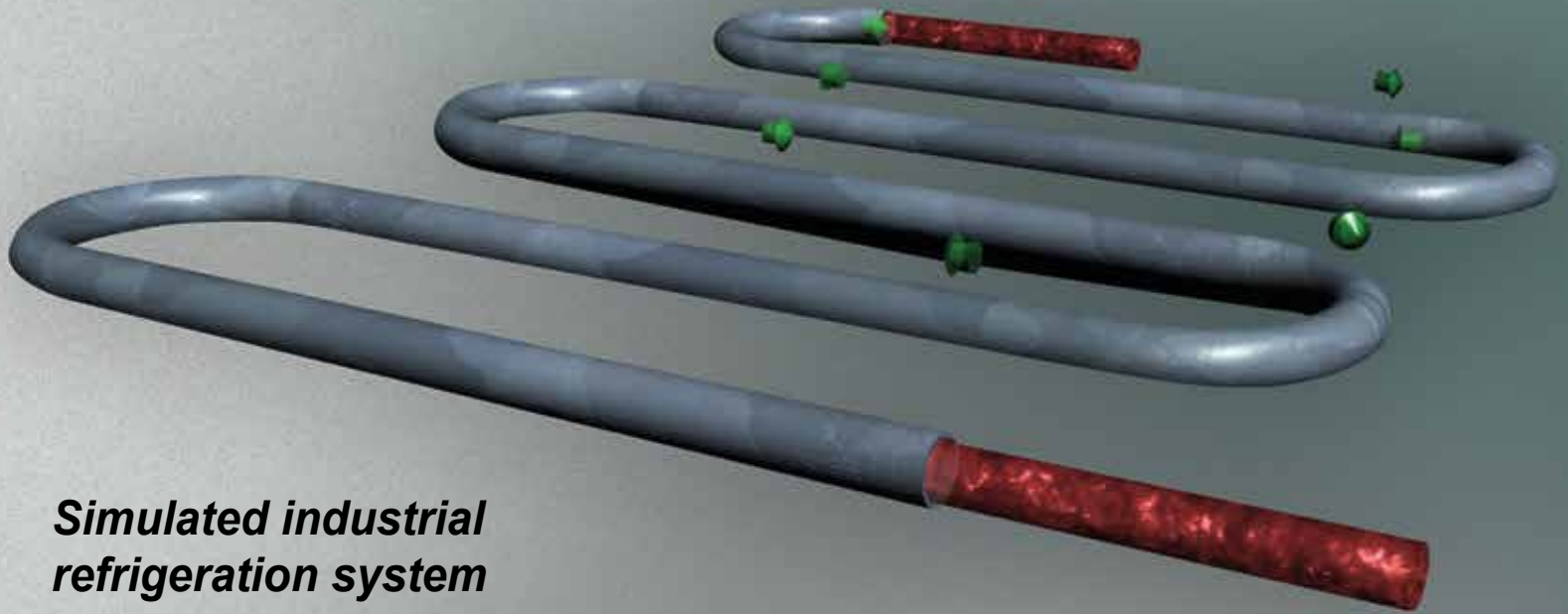


RINK SEAL  **PRO™**

How It Works



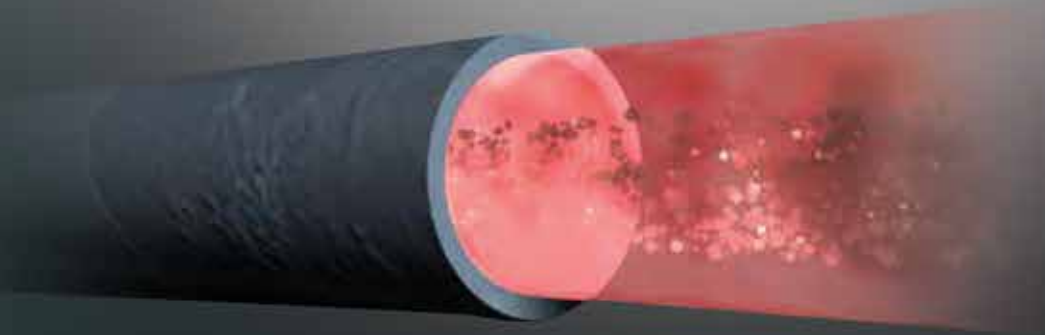
*Suspended particles form on the outside of leak,
penetrate inward, forming a permanent seal!*



***Simulated industrial
refrigeration system***



***Also scrubs and cleans away the rust, corrosion
and scale build-up that forms on the inside of pipes...***



...allowing your system to run more efficiently.

RINK SEAL PRO™

Benefit from 110+ Years of Stop Leak Expertise



Heating:

A leak in a warm floor system can be an unpredictable hard fix. Trying to find the leaks and then accessing them can be nearly impossible. The inoperative subfloor caused by leaking can create frost heaving and cause damage to your cold floor above. In order to fix the warm floor you must rip up the cold floor first. This can easily cost the rink tens or even hundreds of thousands of dollars, and can mean a missed season entirely. Rink Seal Pro™ Heating Sealer is a professionally engineered solution specifically designed to seal leaks in your secondary refrigeration (warm floor/ subfloor) system with industrial-strength bonds. Rink Seal Pro™ is simple to install, costs fraction of a hard repair, and requires no downtime.



Cooling:

Rink Seal Pro™ Cooling Sealer is specifically designed to seal under-ice leaks in your secondary refrigeration (cold floor) system with industrial-strength bonds. Rink Seal Pro™ is simple to install, inexpensive and requires no downtime. Compare this to the hard fix of trying to find the leak, tearing up your floor, repairing the leak, and factoring in downtime and associated loss of revenue. The latter can easily cost in the tens of thousands of dollars.



Maintenance:

Rink Seal Pro™ Preventative Maintenance Solution

Energy Saving

Rink Seal Pro™ improves heat transfer, keeps your system clean, and contains particles in a wide array of sizes. Our custom Rink Seal Pro™ Preventative Maintenance Solution increases the surface area of the coolant, which increases the ability of the coolant to transfer heat. This increase is observed on both the chiller loop and the under ice floor loop. Typical results show a minimum of 2.5% increase in efficiency in new and old systems between the two loops.

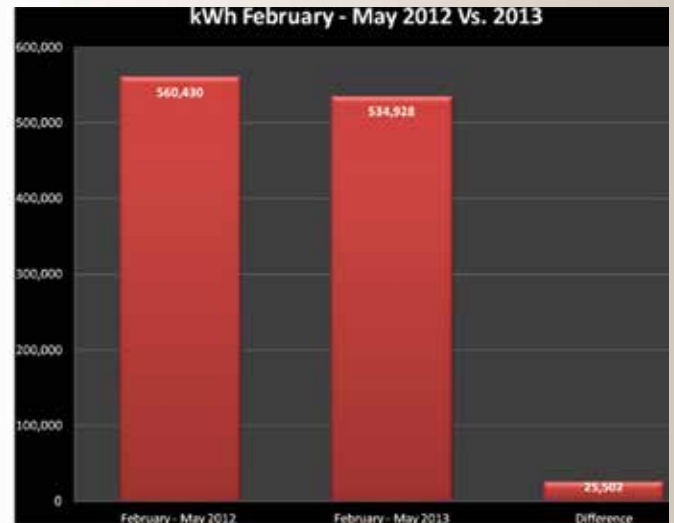
Leak Prevention

Leaks are inevitable; at some point, environmental factors (permafrost, fatigue, etc.), normal usage, or expansion/contractions will cause your system to develop a leak.

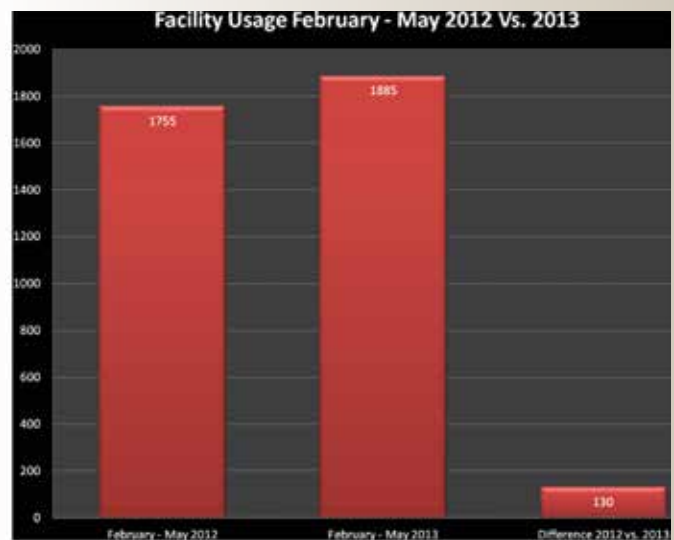
Rink Seal Pro™ Preventative Maintenance Solution will protect your system to prevent potential leaks from becoming a problem. It will stop a leak before you ever lose coolant. Even if you don't know you have a leak, a tiny fracture could be sucking air into your system, causing poor performance (air bubbles, voids, air pockets) and eating away at your efficiency rates. Rink Seal Pro™ Preventative Maintenance Solution stops leaks before they stop your business.

System Performance

Rink Seal Pro™ not only seals heating/cooling leaks, it also provides savings as it relates to energy usage. Rink Seal Pro™ Preventative Maintenance Solution scrubs and buffs to help eliminate scale and rust build up in the coolant system, thereby improving system heat transfer.



Year-over year energy consumption comparison for the same four month period (2012 vs 2013). Note that this was even with facility usage of all three sheets increasing 6.9% in 2013 versus 2012.



Facility usage in hours 2012 vs 2013. Even with increased usage Arena saw energy cost savings after installing Rink Seal Pro™.

RINK SEAL PRO™

Shaler Rink Seal Pro™ is the solution for all of your ice rink leak needs covering both the cold and hot segments. Seals leaks in polyethylene plastic, copper and steel piping. Compatible with ALL types and brands of coolants including ethylene glycol, propylene glycol and salt brine. Protects the entire cooling/heating system. Will not clog or damage the system and is non-toxic. Harmless to ALL plastic, metals, aluminum, hoses and connections.

Shaler® Rink Seal Pro™ Features

- Seals leaks
- Inhibits formation of rust and scale
- Keeps system clean
- Neutralizes pH imbalance
- Controls electrolysis
- Lubricates water pumps
- Compatible with ALL types and brands of coolant
- Conditions and enhances refrigeration/heating system operation.

How It Works:

Stop Leak (External Leak) The particles first adhere to the outside of the seepage and build inward. As the particles react with the outside air, they dry out and expand approximately 15% to form a smooth, putty-like seal.

Water Pump Seal Lube – This material helps in two ways: first, by keeping the seal facing clean, which prevents leaks. Second, because of the wide range of particle sizes Shaler incorporates, some of the smallest particles actually work like graphite to penetrate between the shaft and seal to lubricate and prevent any howl and chatter.

Water/Coolant Conditioner – The particles condition the coolant to help prevent rust and scale build-up which causes dead or weak zones and a loss of system efficiency. Works chemically and mechanically. Chemically: Maintains the pH balance. Controlling pH fluctuations helps in preventing corrosion and electrolysis pitting. Mechanically: Buffs and scrubs to help eliminate scale and rust build-up in the system, improving heat transfer. Works similar to a sacrificial anode in the system to protect inner surfaces.

Improves Heat Transfer – Besides keeping the system clean which in itself aids in heat transfer, Rink Seal Pro™ particles are present in a wide range of sizes, which increases the surface area of the coolant. This increase is felt in both the chiller loop and the under ice floor loop. Typical results show a 2.5% increase in efficiency in new and old systems between these two loops.

ASTM D3147 LABORATORY TEST

Standard Test Method for Testing Stop-Leak Additives for Coolants

This test method covers screening procedures for the preliminary evaluation of leak-stopping materials intended for use in cooling systems.

Gum/Gel Before	No
Gum/Gel After	No
Particles Before	No
Particles After	No
Screen	0.51 mm (0.020 inch)
Final Round	0.64 mm (0.025 inch)
Final Slot	0.25 mm (0.010 inch)
Fluid Lost, mL	495

The results of this test show that a 0.64 mm (0.025 inch) round hole and a 0.25 mm (0.010 inch) wide slot (crack) can be successfully sealed with this product.

Is Rink Seal Pro™ truly effective?

Shaler guarantees that Rink Seal Pro™ will seal any and all leaks that you are currently experiencing. If the product does not stop the leaks within 30 days, and if additional dosage (free of charge) also cannot stop the leaks, you will receive a full refund.

How does Rink Seal Pro™ work?

Advanced microparticles first adhere to the outside of the leak fracture and then build inward. As these particles react with the outside air, they harden and expand 15% to form a smooth, putty-like seal. This establishes a permanent seal on the outside of the leak.

How long does it take for the Rink Seal Pro™ to work?

Results are typically seen within two days, depending on the size of the leak. In most cases the leak will be sealed in one day. However, depending on the severity of the leak, an additional dosage may be required. Please contact one of our Shaler Technicians if you do not see results within one week.

Why should I care if there is a leak in my rink?

Leaks have a significant impact on the environment, and can cause potential liability issues. Above all, they also produce poor ice quality, which can be a significant safety hazard. Further, there is significant financial impact when your systems are operating inefficiently. Leaks are hard to find and quite costly to fix mechanically.

What causes leaks in my rink?

Leaks can be caused by a number of factors: improper ratio of corrosion inhibitor, excessive pH levels, air infiltration, rust, scaling, and mechanical failure are just a few.

Can Rink Seal Pro™ be installed in existing coolant?

Yes, Rink Seal Pro™ is specifically designed to be directly added to your system's coolant. It is compatible with ALL coolants including ethylene glycol, propylene glycol, and salt brine.

Can Rink Seal Pro™ be used in Direct Refrigeration Systems (DFS)?

No, standard Rink Seal Pro™ cooling, heating, and maintenance products cannot be used with R-22 or any other type of refrigerants that are used in Direct Refrigeration Systems. However, we do have a specialized formula of Rink Seal Pro™ specifically designed to be used in Direct Refrigeration Systems (DFS). Contact us for more information.

Will Rink Seal Pro™ plug or damage my refrigeration system?

No, Rink Seal Pro's™ particles will easily pass through a 24-gauge mesh screen, which is about the same as a household screen door. However, it is recommended for peak performance that all filtration systems be bypassed for a minimum of 6 months. For questions or concerns contact a Shaler Technician.

Is Rink Seal Pro™ difficult to install?

No, all you have to do is mix with desired coolant and introduce it at a rate of one gallon per minute (1 gal/min). You can either add coolant if you're low or simply take coolant out of the system to mix. Once the product is mixed, add Rink Seal Pro™ directly in the ground line or directly into circulation (not through the overflow or expansion tank). Every product container is clearly marked with installation instructions, along with an online video on our website. Installation assistance packages are available; please contact one of our Shaler Technicians for further information and pricing.

G. A. Shaler Co.

AT YOUR
Workbench



 **SHALER**[®]
Since 1904

SHALER EARLY HISTORY

Since the foundation of the Shaler Company over 110 years ago, Shaler has created stop leak solutions and performance enhancing products for many applications. Shaler Vulcanizer, the original product introduced in 1904, was a revolutionary stop leak solution for tires and tubes. In fact, *The Milwaukee Journal* dated September 27, 1914 states, "Double your mileage with Shaler Vulcanizer, it vulcanizes thoroughly and makes the repair the strongest part of the tire. It's impossible to overcure or undercure...anybody can operate it."

Since its inception, Shaler's stop leak products have provided successful solutions to millions of customers spanning multiple industries. Whether it's for nuclear submarines, locomotives, industrial equipment, or the automotive sector, Shaler's products have a proven track record for reducing cost and increasing efficiency.

After many years of assisting individual ice rinks with a stop leak solution, Shaler has created a formula specifically designed for under ice coolant leaks. Shaler's Rink Seal Pro™ is a product that

not only serves as a stop leak solution for your cooling and heating loops, but also offers ongoing performance-enhancing preventative maintenance for your system.

Being an environmentally-conscious company is very important to Shaler, which is why it uses organic materials that are guaranteed to have as little environmental impact as possible.

Bottom line, when you choose Shaler, you're not just choosing a single product, you're choosing over 110 years in stop leak expertise.