

MICRALOX®

Micro-Crystalline Anodizing



Brand Development Process and Marketing Strategies

What began as an exploration into a problem became a transformational solution with the creation of a revolutionary new product impacting the anodizing world and improving outcomes in the medical sector.

The requisite factor for success of a brand is its “brand distinction.” The revolutionary anodizing process, MICRALOX®, that has changed how reusable medical equipment made from aluminum is finished exemplifies this. Grant Marketing created a branding and marketing strategy that helped get the word out, enabling the shift in the anodizing and medical industries.

The Situation

Katahdin Industries, Inc. has evolved from several New England-based companies that are now Precision Coating Company, Inc. Some of the former companies were DCHN LLC, Sanford Process Corporation, Boyd Coating, Precision Fabric Company, Medisolve Coatings, and N2 Biomed. Prior to this evolution these companies operated independently. From Sanford Process Corporation, a new anodic coating technology was created that possessed vastly superior corrosion resistance properties that targeted the medical equipment industry where such equipment needs to be routinely cleaned and sterilized.

MICRALOX

After two years of experimentation with many types of chemical processes and testing the results, Sanford Process developed a new anodic coating technology for aluminum that possessed a unique solution to the problem of chemical attack. The process maintained the amorphous structure and beneficial characteristics of Type II and Type III anodic coatings, and also was proven to have partial crystallinity throughout the coating. As was the hypothesis, this partial phase change showed that the coating was now able to resist chemical attack for far greater periods of time and under more adverse conditions. When placed in a strong caustic solution, such as sodium hydroxide, which is used extensively in the anodizing industry to rapidly strip anodic coatings, the micro crystalline aluminum oxide (MICRALOX) parts showed no sign of attack over time periods and in the same bath that completely stripped conventional coatings.

In fact, MICRALOX was so unique that it was granted three U.S. patents, with multiple patents in other countries.

Marketing and Brand Strategy

In 2012, Grant Marketing joined the marketing effort by initiating a brand development process that resulted in creating a brand message for the coating technology, a new logo, advertising, and collateral material to promote the benefits of its corrosion resistant qualities for the medical industry.

The definition of a brand is “evidence of distinction.” Making the claim and putting the delivery mechanisms in place, is however, only the first step. It must be shared with the marketplace and backed up with internal programs that deliver on its claim—provide the evidence. What a brand is and what it claims to be are often different, but with focused attention and deliberate activities, the evolution can be accomplished and the benefits realized.

From our proprietary Brand Development Process, Focus 2020™, Sanford Process determined that the unique selling propositions of MICRALOX were:

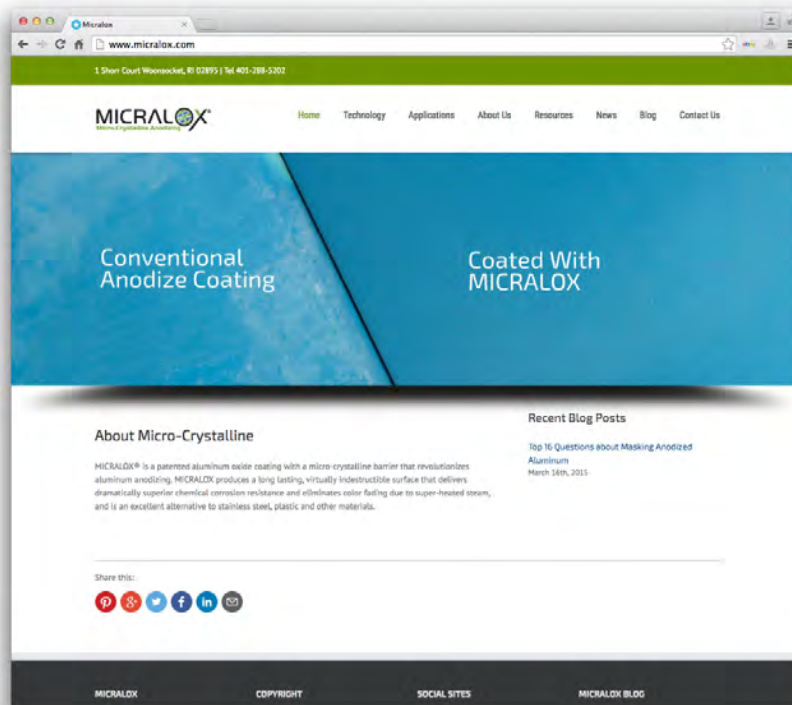
- Protects with superior corrosion resistance of aluminum products
- Provides for a virtually indestructible surface
- Prevents color fading of colored anodized aluminum products
- Sustains repeated cleaning and sterilization, ideal for medical products and equipment

Research was conducted with orthopedic surgeons to understand the need for a new protective coating product used in surgical environments where repeated cleaning and sterilization was performed. Based on internal and external research, Grant Marketing created brand positioning statements for MICRALOX, and designed a marketing plan to promote the new product. The plan included:

- New logo
- New positioning statements
- New advertising
- New collateral material
- New website content
- Press releases



Logo



Website



Performance Matters.

Coating performance matters - MICRALOX®

MICRALOX - Micro-crystalline anodizing is the new performance standard in the coating of aluminum for medical component manufacturing and is quickly becoming the definitive coating for major manufacturers of medical equipment.

- Exceptional chemical and corrosion resistance achieving up to 10 X improvement in in-field performance while meeting all medical product design specifications.
- Replaces conventional anodic coatings with a clear or vibrant colored hard coat. RoHS compliant.
- First patented IP for new anodizing technology of commercial import in more than 25 years.
- Suitable for Sanford Print™ permanent embedded identification printing.
- Available through licensees. For more information on licensing agreements, please contact the Sanford Process Corporation.



See for yourself. Request samples at micralox.com/compare

Amorphous Form



Micro-embedded

Crystalline Form



Micro-embedded in a highly oriented, needle-point pattern

MICRALOX
Micro-crystalline Anodizing

SANFORD PROCESS CORPORATION (401) 597-5000 www.micralox.com

MICRALOX®

Micro-Crystalline Anodizing

Uses

For the highest degree of strength, inert, and ease of cleaning in corrosive forms, Micralox can be performed on all of the wet metal components that have been selected MICRALOX due to its crystalline structure.

Medical

A wide variety of medical instruments are distributed for safety of patients and equipment.

- In addition, medical instruments made to be portable and have high strength requirements. Micralox has been used on all types of all medical instruments.
- In addition, medical instruments made to be portable and have high strength requirements. Micralox has been used on all types of all medical instruments.
- In addition, medical instruments made to be portable and have high strength requirements. Micralox has been used on all types of all medical instruments.

Case Study - Medical

In 2011, a major orthopedic instrument manufacturer contacted Micralox for assistance in finding a new technology that could make a variety of stainless steel instruments that were used in surgery and were subject to corrosion. The manufacturer was looking for a technology that could make a variety of stainless steel instruments that were used in surgery and were subject to corrosion. The manufacturer was looking for a technology that could make a variety of stainless steel instruments that were used in surgery and were subject to corrosion.

Working closely with this industry leading company through a thorough product and process engineering stage process, Micralox was able to develop a technology that could make a variety of stainless steel instruments that were used in surgery and were subject to corrosion.

- A direct anodic hard coat with the chemical resistance comparable to conventional high temperature hard coat anodizing.
- A coating method impervious to abrasion and impact that also provides the post form ability due to MICRALOX anodizing.
- An significant cost reduction to very low production of the post form ability.

Micralox is a process that can be used on all types of wet metal components that have been selected MICRALOX due to its crystalline structure. Micralox is a process that can be used on all types of wet metal components that have been selected MICRALOX due to its crystalline structure. Micralox is a process that can be used on all types of wet metal components that have been selected MICRALOX due to its crystalline structure.

Brochure

Current

Since the inception of the original MICRALOX, Precision Coating has introduced two sister chemistries to the MICRALOX family: MICRALOX® Ultra and MICRALOX® Lumina.

MICRALOX® ULTRA

Micro-Crystalline Anodizing

When maximum performance for strong alkaline cleaning is critical to quality, MICRALOX Ultra provides +50X the chemical resistance compared to decorative Type II anodizing. Aluminum parts coated with MICRALOX Ultra can withstand high-pH cleaning and sterilization protocols commonly used in European markets. MICRALOX Ultra-coated parts can also withstand many other aggressive environments that would otherwise strip conventional anodic coatings and subject the parts to extensive corrosion.

MICRALOX® LUMINA

Micro-Crystalline Anodizing

The clear, translucent oxide of MICRALOX Lumina provides a perfect balance of breakthrough chemical resistance and design flexibility for medical device applications. Whether left natural, or dyed one of nine vivid colors, MICRALOX Lumina coatings achieve up to 50X the resistance in a hot alkaline strip test compared to Type II decorative anodizing. Unlike conventional anodizing and hard coat, the partially crystalline anodic coatings of MICRALOX Lumina hold up over a life-time of regular cleaning and sterilization without fading, chalking, or corroding.

As with all MICRALOX coatings, MICRALOX Ultra and MICRALOX Lumina can receive embedded Sanford Print for crisp, permanent markings that do not delaminate, fade, or chip. This combination of superior chemical- and corrosion-resistant coating and non-destructive markings provides assurance for a full life-time of stringent cleaning and sterilization, as required of all medical devices.

50 Times Longer Protection

It should be noted that due to the fact that there is only a partial phase change and that all the benefits of aluminum oxide remain, the new anodic coating is not impervious to chemical attack but does have a far greater ability than traditional anodic coatings to fend off the attack.

On average, the feedback is that the MICRALOX coating lasts five to 50 times longer than traditional anodic coatings when exposed to the same conditions. The result is that anodized aluminum for reusable medical products now have significantly higher performance capability and a longer life cycle, especially when subjected to the harsh treatments of the medical world.

Notably, there were two other important side benefits that came with this incredible innovation. The first was that the coating passed 15,000 hours of salt spray exposure without any pitting. This added benefit creates an alternative solution for marine applications as well, and could be a viable candidate to replace chromium-based seals. This could have an important environmental impact.

The second was the discovery that products anodized with this process now passed the Sterrad and Steris sterilization methods without any organic dye fading or discoloration for many popular colors. The ability to pass exposure to hydrogen peroxide, which is the dominant chemical in the Sterrad NX and Steris DO processes, has helped solve one of the biggest performance concerns for anodized aluminum in the North American medical market. Previously, with few exceptions, organic dyes would fade or discolor from even a few exposures and sterilization procedures. This impacts cosmetic appeal and translates into perceived instrument performance issue is a significant event.

Transformational Advances

With this revolutionary anodic coating on the market for use on reusable cases, trays, tools, and components, the impact on the medical industry has been transformational. Engineers, buyers, and industry leaders who learn of MICRALOX's coating capability realize it is an easy substitute for traditional anodic coatings. More tests have been performed and use and demand continues to grow as more OEMs are specifying the finish on their prints.

Since MICRALOX is still classified as an aluminum anodizing, there are no major hurdles that have to be jumped to get approvals on its use. It is simply a better performing aluminum oxide coating! Because it retains the characteristics of Type II and III anodize, MICRALOX is the coating of choice in the medical device industry. Those characteristics such as dye-ability, hardness, thickness, and electrical insulation, along with cytotoxicity compatibility, etc., have made changing finishing specifications easy and quick. Adding embedded printing to these positive features makes the issues facing the medical industry far less intrusive.

What began as an exploration into a problem became a transformational solution with the creation of a revolutionary new product impacting the anodizing world and improving outcomes in the medical sector.

Today MICRALOX is known the world over as a superior aluminum anodic coating to prevent corrosion used by medical device and equipment companies. **Revenue from MICRALOX technologies now represents more than 50% of the company's business, has quadrupled sales in the target market, and made a significant and positive impact on the company's long-term competitive position.**

“Grant Marketing worked with us from the very beginning to help develop the messaging around our new coating technology. They provided experienced and thoughtful guidance about how to set the marketing message in a way that would drive sales growth. We couldn’t have been happier with our experience working with their team.”

Tim Cabot



www.grantmarketing.com