
Why Microcrepe™?

At MICREX, product development revolves around the MICREX Process technology. The term Microcreping is used to describe the range of what the MICREX Process can do to alter a product to create an enhanced, value-added product.

Microcreping works on many products, but not on everything. The first step is to figure out which components in a product are opportunities for enhancement, and which are not.

Some Examples

Consumer Goods

Microcreping an entire diaper would destroy it. But parts of the diaper could benefit from Microcreping:

- A layer in the ACL to expand when wet, either enhancing absorbency or signaling that the diaper needs to be changed
- A stretch panel
- A conforming leg cuff

Industrial Goods

Obviously one cannot microcrepe an entire wind turbine. But Microcreping electrical insulation so that it conforms and bends around leads is beneficial, as it allows for smaller components and higher operating temperatures.

Home Furnishings and Fashion

Some garments are made from 100% of Microcreped textiles. But many garments benefit from processing only a small component:

- As the extensible core of the stretch engine in a waist band
- As interlining that will stretch and conform to body movements

The Value of Microcreping

As a product designer, your process of evaluating the benefits of Microcreping involves matching the physical properties of your substrates with the solutions available through Microcreping.

There are two broad ways of using the Micrex technology:

1. Cost Reduction

Many times through either “creative destruction” of an existing product category or simple incremental improvements — cost reduction is the outcome.

For example:

- Silk is a substrate which has been highly optimized over thousands of years. The likelihood that Microcreping will “improve” silk is pretty low. On the other hand, by adding dimensionality to an inexpensive textile or decorative nonwoven, some of the richness of silk can be achieved at much lower costs for certain applications.

The Value of Microcreping (cont.)

- Microcreped disposable industrial wipes have virtually eliminated the traditional shop towel. Better performance at a low cost.

2. Making something possible which was impossible

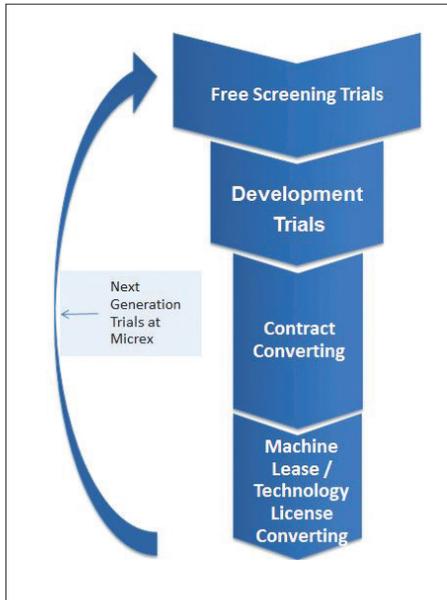
Example: Several sophisticated medical devices have been made possible by using Microcreping to add the “missing property” of softness or conformance. A good application for Microcreping is making something that is harsh – less harsh, rather than making something already soft – softer.

A careful study of patents that reference the original MICREX patents will show a wide range of products developed using both approaches.

In many cases a long-term competitive advantage can be achieved through product patents, trade secrets or exclusive technology license.

Microcreping is not a universal solution, but when properly understood it is a powerful tool for the product development professional.

How to Get Started



The MICREX Process has a minimum of 27 different points of adjustment. Each of these “points” has from two to almost infinite levels of adjustment, allowing for potentially millions of different sets of process settings. In addition to these machine settings, the recipe of the incoming material is critical to the performance of the process.

As there is no reliable predictive model for how a particular substrate will process on a MICREX/Microcreper, MICREX technology is applied using an empirical model based on trials. We have three lab scale machines in our production facility, on which we can produce all nine configurations of MICREX/Microcreper. This allows us to efficiently test your product under a wide range of conditions to quickly arrive at a go/no go gate toward further development.

Based on the success of these initial “screening trials” for your product, we can seamlessly move through developmental and then production trials. Our extensive know-how allows us to optimize the final product to fit with your objectives.

Very often we are able to suggest modifications to the base substrate to not only improve performance on the MICREX/Microcreper, but also to yield system-wide lower costs.

A close working relationship with our customers is critical to success. Successful firms have learned that even when one round of product development has been completed, the key to continued success is to integrate MICREX in subsequent generations of products.

Almost without exception — no company has been able to successfully innovate new Microcreped products on their own production equipment.