Welcome to the “summer” edition of the Micrex Newsletter. For previous newsletters please see: www.micrex.com/newsletter.htm.

One Comment: Several of our valued customers have asked why they had been dropped from our newsletter list. In fact we at Micrex have purposely delayed this newsletter. Each issue generates an immediate influx of enquires and trials -- which we welcome. An unexpected by-product of our success is that we have been simply swamped with trials. Over the summer we brought aboard some talented new staff and increased our ability to process new material – hence now a new newsletter.

In this issue: Surface area, a multivariable tool for new nonwoven designs.

The Micrex® Process™ is well known in our industry. The largest use is for softening wipes, etc. More recently, Microcreping has become popular as a converting method to add controlled stretch and, in some cases, elasticity. Nevertheless, a fundamental characteristic of a Microcreped web that has been largely overlooked is control of web surface area. Depending on the substrate and the creping process variables, the cross sectional profile of a Microcreped web can vary from a soft wavy (typical of a sine wave) to the sharp peaks and valleys of a saw blade.

All crepe patterns have at least two common characteristics:

- The “actual surface area” (per square area) increases in proportion to the compaction during creping and can be controlled between + 2% and + 300%.

- The “contact surface area”, or the part of the web that can touch another surface, also varies and is typically less than 10% of the area before creping. Again, crepe pattern and contact surface area of a creped product will depend on the nature of the web (primarily stiffness) and creping process variables.

Surface area can be important:

- Filter flow rates, filter solids holding capacity, and filter cake release can improve.
- Surface occlusion can be limited and air circulation + skin comfort can improve.
- Air space between the peaks can help control anaerobic microorganism growth, limit cohesion / adhesion, and control friction.
- Tactile perception will change (sometimes negatively). Crepe patterns can be designed to influence acoustical and / or light absorption / reflection properties.

Changes in surface area come with other changes as well. Thickness automatically increases as will machine direction stretch and toughness (TEA). Visual and tactile changes are often perceived by users as positive. There are many parts to any product development puzzle, but a free pilot line creping trial can help you to learn if Microcreping to customize surface area can help you find your next new product.

As always, if there is anything we can do to help your company better utilize the Micrex Process to impart softness, bulk, stretch, hand improvement, absorbency, drape and decorative effects in paper, textiles, films and nonwovens, please contact us.

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