



Microfiber

Understanding Microfiber Technology

It has been said that microfiber technology is arguably the most significant product innovation to the cleaning industry in the last century. Not only has microfiber proven to reduce time and energy on certain tasks, it is environmentally friendly and rarely requires the use of chemicals. Research has also shown that using microfiber may reduce the potential for back, shoulder and elbow injuries, limited workman's compensation claims.

Departments who are using micro-fiber technology understand and appreciate its many features. It is those who are reluctant to change their traditional cotton cloths and mops that need to be trained on the benefits of microfiber.

What is Microfiber

At first glance, the microfiber cloth appears to be no different than other cotton cloths. Both have similar thickness and feel, but when comparing the two it's apparent that microfiber may be a step ahead of cotton counterparts.

"The major difference between microfiber and cotton cloths is that microfiber strands are so small the human eye can barely see them," says Tom Peglowshki, general manager at Norton Abrasives, Worcester Mass., manufacturer of abrasive products and solutions.

Microfiber is a synthetic fiber made up of a blend of polyester and polyamide or nylon. These materials are bundled together to form a strand that when examined under a microscope appears in the shape of a star. Those bundles are then split into ultra-fine single fibers using specific combination of chemicals, heat and agitation. The fibers are finally woven together to make the finished microfiber product.

Research shows that it is the amount of splits that determines the quality of the microfiber. The splitting process breaks down each fiber into a very thin strand, estimated to be at least one-sixteenth the size of a human hair. When woven together these strands create a surface area covered with millions of spaces between the fibers to trap moisture, dirt and debris.

"The strand curled ends with also reach into cracks and crevices, picking up and removing dirt, holding it inside the pad", says Judy Cline, director of microfiber cleaning categories. Traditional cleaning tools such as string mops and cloths "won't reach into the crevices, but will instead push the dirt around," she adds.

Research has also shown that static charge aids in the effectiveness of microfiber cleaning. "The millions of fibers rubbing together produce a static charge that attracts the dirt, pulling it in and trapping it until the cloth or pads are washed, at which time the charge is broken the dirt is released," according to Chris Schran, president of Fountain Valley, Calif.-based REDCO, manufacture of various microfiber products and accessories.

Benefits of Microfiber Use

Although many departments can benefit from microfiber, health care facilities have been quickly to embrace this newer technology. In an effort to reduce cross contamination between patient rooms,



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some state laws require housekeeping department's change out the mop and/or chemicals and water after every room. Using the microfiber flat mops, this requirement isn't difficult to meet. Because the flat mops are smaller and lighter (roughly three pounds when wet) than traditional string mops (between eight and 10 pounds when wet), more mops can be carried on carts and easily changed between rooms. Pushing and lifting less weight with the microfiber flat mops has also proven to reduce worker injury.

Some argue that the microfiber flat mop is not only more ergonomic and productive, but cleans better. "String mops create a lot of splattering on baseboards and very little grout cleaning," says Bruno Niklaus, marketing communications manager at Unger Enterprises, international manufacturer of professional cleaning tools based in Bridgeport, Conn. "String mops push the water into the grout while the microfiber flat mop's looped fibers grab and drag the dirt out."

In addition to cleaning floors, flat mops can be used on walls and ceilings. Microfiber cloths and mitts have been developed for smaller surfaces such as counters, windows and mirrors. Also, some manufacturers have come out with wands that use microfiber products for harder-to-reach surfaces & high-dusting tasks. "Wherever you would use a mop or rag, you could successfully substitute microfiber technology," says Bland.

Because microfiber is so versatile, some manufacturers have expanded their product line to include microfiber scrubbers, general purpose, soft cloths, etc., to target specific tasks.

Care and Life Expectancy

The life expectancy if a micro-fiber product will depend on the number of factors. The first is the quality of the microfiber composition that is used. The care that is given to the cleaning and storage of the product will also affect its life span. If cared for properly, micro-fiber can be laundered anywhere from 100 to 500 times.

According to some manufacturers, the product itself will fall apart long before the microfiber becomes ineffective. Of course, this is assuming that the product is properly used and cared for.

When using microfiber, there are very few applications that require the use of chemicals. Studies show that because of its technology, microfiber will clean more effectively when used dry than traditional products do when using chemicals. In situations where chemicals are required, manufacturers have come up with a few recommendations for combining the two:

"Dampen the pad or cloth before using it, but do not 'wet' it," says Schran. "if too much water or chemical is used, the crevices that are designed to attract and hold dirt will fill with liquid."

Niklaus adds that very few chemicals can harm microfiber, but it is important to stay away from acids. "Watch for harming labels. If the chemical indicates that it will harm plastics, it will most likely harm microfiber."

Regardless of the use of chemicals, the laundering of microfiber products will also impact its life span.



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Laundering microfiber isn't much different than washing other cleaning products. As long as detergents have an overall pH of under 11, which is standard in most detergents, any soaps can be used in the cleaning process. While washing, steer clear of harsh bleaches, which will break down the fibers and hinder the microfiber's effectiveness.

“It is important also to remember that microfiber should be washed in temperatures that do not exceed 200 degrees,” says Cline. “For drying, you want a temperature between 130 and 140 degrees, max.” Temperatures higher than these could potentially harm the product.

“One common mistake is to wash the microfiber with products that are prone to lint,” says Peglowski. “If this happens, the microfiber will continue working in the laundry and will collect that lint, making the cleaning process ineffective.”

Fabric softener will have a similar effect. Microfiber may collect particles from the softener sheet, clogging up the crevices in the cloth. Softeners might also reduce and possibly eliminate the static charge that makes microfiber effective.

Cost of Microfiber

The initial cost of microfiber products may be higher than what many departments are prepared to pay, but manufacturers guarantee significant savings over time. Before implementing a program, it is important for departments to consider life-cycle savings, reduction in chemical purchases, water bills, laundry services and reduced labor costs. Comparing current expenses to costs associated with the microfiber will give departments a good idea of long-term savings.

It is also important to consider the fact that housekeeping departments are constantly being asked to do more with less. Products such as microfiber will help staff productivity and efficiency saving time and money in the long run.

Many distributors will work with housekeeping departments to figure out the estimated cost savings, as well as how to implement the new system.

“We offer a variety of free training seminars to our customers,” says Murphy, “because change is difficult and unless you train them on the advantages of microfiber, they aren't going to want to use it.”

Although there is still some resistance among members of the housekeeping industry, microfiber technology continues to gain momentum. Industry sources expect that as more information becomes available, microfiber product offerings will expand well beyond the existing cloths, mitts and flat mops. In fact, some manufacturers are already in the planning phase for new applications to be released this year.

“We are beginning to work beyond the realm of conventional cleaning and moving into specialty cleaning areas,” says Cline. “I think microfiber technology is a trend that will continue to take off.”