

CLEANING OPERATIONS: Hand Tools

A Closer Look at Microfiber's Cleaning Benefits

The pros — and a few cons — regarding popular microfiber mops and cloths

By Laura Bayard

[Email the HS editors.](#)

Although Europeans have been using microfiber cleaning tools for about 20 years, the technology hadn't caught on with the U.S. cleaning until a few years ago. Manufacturers claim manmade microfiber materials, manufactured by chemically splitting small polyester and polyamide fibers into even tinier fibers, provide a superior cleaning capability compared to traditional cotton mops.

"You take a fiber about the size of a human hair and it's basically split into 16 different segments," says Dave Maurer, vice president of Geerpres, Muskegon, Mich. Because they are so small, microfibers can get into surface pores and crevices, whereas cotton mop materials are too large for deep cleaning.

"The abrasiveness of the fiber really cleans dirt out of the surfaces," says Bruno Niklaus, vice president of global marketing, Unger Enterprises, Inc., Bridgeport, Conn. "Through the many thin fibers, it sucks up dirt much better than any other mop."

The chemical process manufacturers use to split the microfibers creates a positive electric charge. When dry, the static causes dirt, which has a negative charge, to cling better to the mop.

"If you wipe over a floor, the dirt is going to stick to it," Maurer says. "When you pick a regular cotton mop off the floor, the dirt tends to fall off." Microfiber cloths also tend to leave fewer streaks on windows because they pick up more dirt particles.

Currently, manufacturers offer microfiber mops for wet or dry use, cleaning cloths for counters, windows and other surfaces, and pads for washing walls. Fringe mops have microfiber pads with cotton surrounding the microfiber that pick up larger concentrated particles of dust and debris. Antibacterial mops, treated with special chemicals, remove germs and bacteria. Some mop systems and cloths are color-coded, so employees can easily match cleaning tasks with to proper tools. Customers can purchase either looped or cut (also known as sheared) fibers. Looped fibers glide smoothly on the

floor and work well on even surfaces. Cut fibers are more abrasive and drag more than looped fibers, but are much more effective at cleaning porous, grouted or unsealed floors, Niklaus says.

Safety benefits

The benefits of microfiber materials extend beyond cleaning. Cleaning managers choose microfiber materials because they are lightweight, therefore safer for employees to use.

The New Hampshire Hospital is considering switching to a microfiber mop system, partly because of safety issues. Hospital staff are using microfiber on a trial basis. “We were having a lot of injuries with the old cotton string mops,” says Philip Wright, director of environmental services at the Concord, N.H. hospital. He estimates that his cleaning staff averages about one or two injuries a month using cotton mops. “[The employees] do like how much lighter [microfiber mops] are, and how much easier they are to maneuver.”

When wet, cotton mops are much heavier than microfiber mops, which only weigh about two pounds. “Two-thirds of the liquid in a cotton mop is not used,” Niklaus says. “Microfiber mops actually use about 10-20 times less liquid.”

Less liquid in the mop results in less water on the floor and the floors dry faster. Another benefit: slip-and-fall accidents are reduced when floors dry faster.

Infection control

Health-care facilities, in particular, benefit from microfiber mop use. When cleaning patient rooms, workers must change mops and mop water often to prevent the spread of infection between rooms. Frequent changing, dumping and rinsing creates more work for employees and increases the chance for potential injury.

Before trying out microfiber mops, Wright says his staff often used the same cotton mop in two or three rooms, as well as the same bucket of water. Employees are currently testing a microfiber system whereby, if employees have to clean 30 patient rooms, they submerge exactly 30 microfiber mop pads in a bucket of water. After each room, cleaning workers replace the mop pad, therefore eliminating cross contamination. Less water and chemical are wasted because employees are not dumping buckets of solution as frequently. This also means fewer injuries resulting from lifting heavy buckets.

Some manufacturers offer pre-moistened pads, eliminating one more step.

Cost savings

First-cost for microfiber mop systems can be high, but manufacturers say that a cost-benefit analysis will prove that in the long run, microfiber will save departments money by using less water and chemicals, reducing work-related injuries, and increasing productivity.

A 2002 study from the U.S. Environmental Protection Agency, "Using Microfiber Mops in Hospitals," found that at UC Davis Medical Center, the staff used 105 gallons of water to clean 100 rooms using cotton mops. With microfiber mops, they only used 5 gallons per 100 rooms.

"We have found that people clean much faster and much more," says Ted Hagberg, president of Hagco Industries, River Falls, Wis. "If it's easier to do, we're more likely to do more."

Microfiber mops and cloths are designed to last a long time — most manufacturers guarantee their microfiber mop pads for 500 washings, although many say the pads will last longer because they are made of a synthetic material. "It takes a long time to destroy a microfiber mop," Niklaus says.

The future of microfiber

These seemingly "wonder mops" don't come without criticism. "They won't pick up as much material," Maurer says. "They were designed for routine cleaning. Because the fibers are so short, they cannot hold enough liquid, and therefore are not useful in cleaning up spills or puddles, or for mopping up entranceways. For that reason, Wright says his department continues to use cotton mops in lobbies and other public areas.

However, Niklaus says Unger is currently developing a microfiber mop that may pick up those spills. "It's actually absorbing about four or five times its own weight," he says.

He says a microfiber grading system is in the works that should help consumers understand what they are buying and the differences between varying qualities of microfibers.

Manufacturers say microfiber sales have increased dramatically in the past few years, and they predict that the trend will only continue.