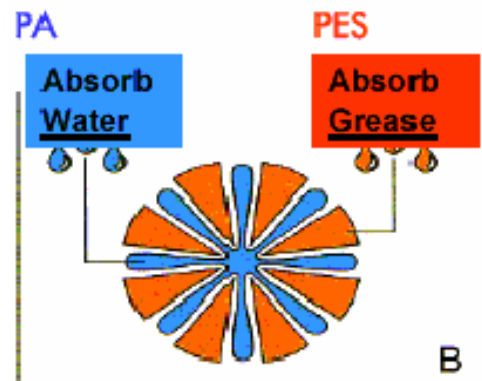


Microfiber

- I. What is Microfiber?
- A. Microfiber consists of very fine threads of polyester and polyamide (nylon) that is woven together to form a single thread
1. one microfiber is 100 times thinner than a single strand of human hair and twice as fine as silk.
 2. when woven together, the microfibers create a surface area 40 times greater than that of a regular fiber
 3. the increased surface area is what gives microfiber the enhanced absorption
- B. Microfiber is traditionally defined as a fiber with a denier less than one.
1. denier (D) is a measure of the thinness of a fiber and is the weight in grams of a continuous fiber that is 9,000 meters long
 2. $1 D = 1 \text{ gram}/9,000 \text{ meters}$
 3. some microfiber is so fine that a single strand stretching 25,000 miles around the earth would only weigh a few pounds
- II. How does microfiber work?
- A. Unlike the rounded threads found in ordinary cloth, microfiber has numerous wedges that draw dirt, oil, liquid etc., into the core of the fiber. (see illustration)

Microfiber in the cross cut

- ☒ Polyester (PES) absorbs grease and dirt from the surface
- ☒ Polyamide (PA) absorbs water from the surface.



- C. Studies have shown that microfiber can even capture up to 99% of microscopic particles such as bacteria on many surfaces instead of just pushing it around
- D. Microfiber has microscopic barbs that have the ability to scrape and hold the soil from the surface and store it in the towel until it is washed
- E. Microfiber consists of 2 polymers
1. polyester
 - a. lyophilic
 - b. has an affinity to oil
 2. polyamide
 - a. hydrophilic
 - b. has an affinity to water
 - c. Microfiber can absorb up to 7 times its weight in fluids

- F. Microfibers have a positive charge that attracts dust, which has a negative charge. Therefore dust and soil particles are not only attracted to the Microfiber, but are held tightly and therefore not easily re-distributed during cleaning

III. Why Use Microfiber?

A. More sanitary.

- 1. Research conducted by a hospital in Sweden ("Cleaning Methods with low Chemical Use" by the University Hospital in Lund Sweden, October 1998) found that dry cleaning with a microfiber cloth reduced surface contamination 85% better than traditional wet/chemical cleaning
- 2. they reduced their consumption of chemicals by over 75%

B. More economical

- 1. You do not need to replace them as often
 - a. Microfiber cloths resist tearing and shredding and as a result do not need to be replaced as often
 - b. can be laundered 500-1,000 times and still maintain their effectiveness
- 2. Significantly reduces the need for chemical cleaners thereby reducing costs
- 3. Dry in 1/3 the time in the dryer thereby reducing energy costs

C. Better for the environment

- 1. reduced need for chemicals that would otherwise go into the environment
- 2. because they are reusable, it reduces the need for disposable products such as paper towels

D. Saves time

- 1. surfaces dry more quickly because more moisture is absorbed
- 2. one step cleaning—cleaning and polishing are accomplished in one swipe
- 3. dry in 1/3 the time in the dryer thereby reducing energy costs

IV. Use and Care of Microfiber

A. Uses

- 1. eye/sunglasses
- 2. furniture
- 3. fine collectibles
- 4. lamps and shades
- 5. TV, computer, iPod, Palm Pilot screens
- 6. CD's
- 7. auto interiors and exteriors
- 8. jewelry
- 9. floors
- 10. windows and mirrors

B. Can be machine washed and dried

- 1. do not use bleach—breaks down fibers over time

2. do not use fabric softener, dryer sheets or detergents with fabric softener in them
 - a. this coats the fibers and makes them less absorbent
 - b. eliminates the static charge that makes the fabric so proficient at trapping dust and liquid
3. use a low heat or fluff setting on the dryer. Excessive heat is the #1 thing that will damage microfiber over time.
4. wash and dry with other low lint producing fabrics

Written by
Mandy Milne
Tupperware Star Manager
mandymilne@comcast.net