

# The Technical Edit

## Microfibre Misconceptions and Myths

### with Denise Hanson | Head of Technical Services

**Over the last few months I've been asked a number of questions regarding microfibre, its use and how it should be cleaned, I'd like to use this piece to clear up some common misconceptions.**

Microfibre itself is a material made from a special yarn, it is these material fibres that capture the soiling during the cleaning process. Whilst Microfibre is being sold widely in both the retail and professional markets, the types of material vary greatly. Many of the less expensive cloths available are manufactured by a process which uses a binding agent and a compression which makes a pad. This type of microfibre does not have the same longevity of use as that of a woven fabric, the woven cloths tend to be the more expensive microfibre examples. Please note that many of the microfibre cloths available also contain additional yarns to reduce the costs of the systems but it is important to note that this can also reduce the systems cleaning ability.

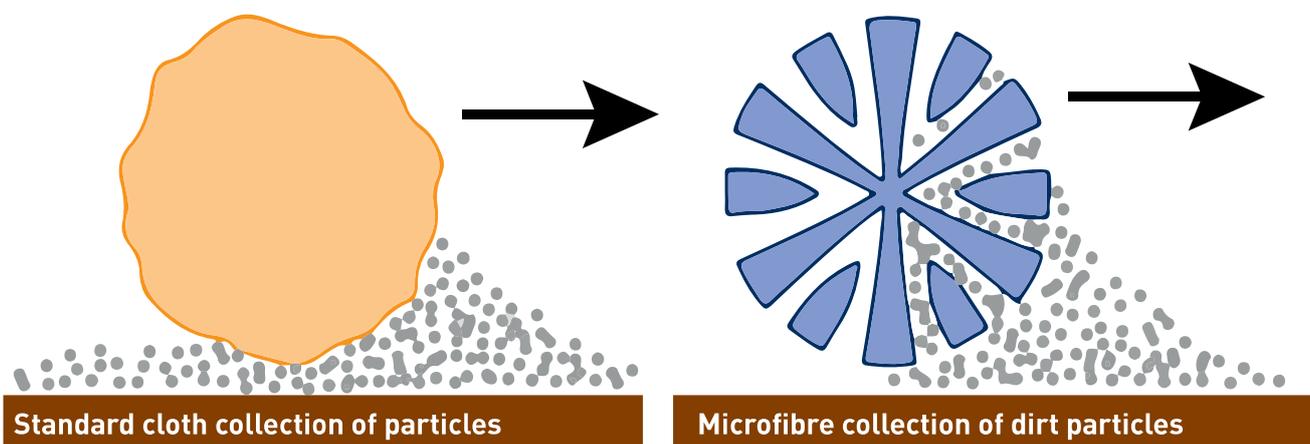
The concept of using microfibres, tiny fibres only visible under magnification, was originally used by the Japanese in the 1950's in the manufacture of clothing and towels.

It was in the 1980's that a Swedish company ordered a large quantity of towels only to find that they would not sell. Not knowing quite what to do with them they started to tear them up and use them to clean their factory. These strips of fabric were discovered to have excellent cleaning properties and a consumer market for microfibre technology developed.

It is important to note that a good microfibre system used correctly removes 99% of bacteria compared to conventional methods that remove 30%.

So how does microfibre work? Well when used dry, microfibre cleans by creating a static charge that attracts the dirt into the fibres, and it is 100% more effective at removing dirt than conventional methods. When microfibre is used damp, dirt is drawn into its fibres by capillary action, and the cloths can remove 99% of bacteria from a surface. The quantity of water used is minimal and the surface dries in a fraction of the time of traditional methods, leaving the surface ready for use.

It is critical that the laundry process is in place before the introduction of any type of microfibre system to a site. Without a laundry system that can cope with the amount of cloths and mops in use then the system simply will not work. It is NOT sufficient to wash these cloths / mops by hand as the bacteria that they collect will not be killed or removed.



## THE STANDARD

A good laundry system is a key part of a successful microfibre system, generally the materials will need to be held at 60 degrees for 20 minutes or at 90 degrees for a minute in the washing cycle to kill bacteria collected in the cleaning process.

Good quality microfibre mops and the cloths can be washed and dried at temperatures up to but not exceeding 92 degrees.

Additionally, you should never wash cloths and mops together always wash as separate loads and never mix microfibre loads with any other materials, this is because microfibre is so successful at removing dirt it would hang onto the dirt and lint from the other fabrics. It is also important to use a washing powder without brighteners or bleaches and never use a rinsing agent or fabric conditioner, use of these materials will damage the effectiveness of the cloths / mops. It is imperative to keep clean and dirty cloths and mops separate and to use separate laundry bags.

It is also important that an industrial washing machine, that is proved to reach and maintain the temperatures required is used for the laundry process. A recent Which report showed that 2/3rds of the machines they tested did not reach 60 degrees on their 60-degree wash cycle – the lowest temperature recorded at the machines 60-degree cycle was just 43 degrees!! (For more information search Katie Benson – Which 2013 “Washing machines – does washing at 60 really banish bugs?”)

If we look at the reasons why hand washing the systems is not acceptable the following information is key. Hot water does kill bacteria, but what’s comfortable for your hands is also pretty comfortable for bacteria. Most pathogens start to die off around 60°C to 70°C (140°F to 158°F), but water from the “hot” tap in a sink is typically below that (40° to 55°C or 104° to 131°F). In order to kill bacteria, the water would have to be way too hot for you to tolerate. - Source: StackExchange – Medical Sciences <https://medicalsciences.stackexchange.com/questions/500/does-hot-water-kill-germs-better-than-cold-water>

So, if we have used microfibre cloths to remove dirt and bacteria, handwashing may remove the dirt, but the bacteria will continue to live and multiply on the cloths surface. In fact, research from the University Hospital in Lund Sweden shows that once the damp cloths have just 12 hours before bacteria start to grow, and that’s on a clean cloth exposed to the air! Source - Test data on the bacterial level in Cleaning Material - Ann Kristen Ekholm, University Hospital in Lund Sweden October 1998.

### **On precis their research showed the following:**

- The test shows that in damp, clean material which has been washed at a temperature higher than 90 degrees, bacterial growth takes place at some time after 12 hours.
- It was concluded that all cleaning material that is damp must be used during the day, i.e. within 12 hours. When stored in another manner, the material must be dried.

Another question frequently asked is if we are only using water with our microfibre cloth are gloves required? Dependant on the amount of microfibre in the cloth the cloth can have an unusual feel to it. As these cloths are designed to remove and capture grease then it is reasonable to expect that natural oils from the skin will also be captured. Prolonged use of the cloths without gloves can leave the hands dry and chapped so the use of gloves will depend on the amount of time the cloths are being used for.

So, in summary, used correctly with a robust laundry procedure microfibre is a highly effective system to remove dirt and bacteria without the use of chemicals, but we should always look at not only how we intend to use the product but how we intend to launder it to see if the microfibre solution is the correct one for the individual site.