

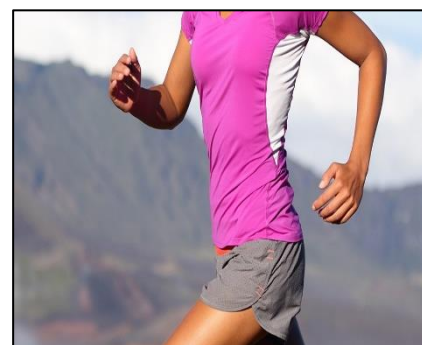
MICROFIBER – CONCLUDING PART

REF: TT/ MARCH 2020 / WK 4

Wet processing and fastness properties of microfibers

a) Challenges:

- Due to the special structure of micro fibers, larger quantity of size, oil agents and wax stays on warp yarns. Hence, desizing is difficult and less economical.
- Microfibers have greater absorption area resulting in a dyeing rate four times higher than that of normal, which can cause unevenness in dyeing.
- They also require more dyestuff than standard fibers to obtain the same depth of shade.
- Larger surface area of microfibers means an increase in number of threads exposed to light. This results into lower light fastness rating.
- Wash fastness and color fastness to rubbing is also poor.



b) Precautions to be taken :

- Better knowledge about the size applied and optimum parameters during desizing should be followed.
- Suitable pre-setting conditions help in maintaining stable dimensional stability, softness and better dyeing results.
- Careful selection of the dyes – The dyes should be compatible, having same exhaustion rates and good migration and levelling properties
- Optimizing the dyebath conditions and dyeing cycle.
- Proper selection of dye bath additives like –
 - **Leveling agents** - Leveling agent which works at lower temperatures.
 - **Dispersing agents** - More quantities of dispersing agents are required because amount of dyes required are more to produce the desired depth.



- **Lubricants** - Microfibers are prone to creasing; hence use of dye bath lubricants is required.
- Fabric should be properly soaped after dyeing.
- Good reduction clear process is needed to achieve satisfactory washing, rubbing and light fastness properties.
- Washing is required for neutralizing and removing alkali after reduction clear treatment.
- Microfibers easily stains and produces static charges, a hydrophilic, antistatic and anti-soil treatment softening is recommended to ensure fabric softness.

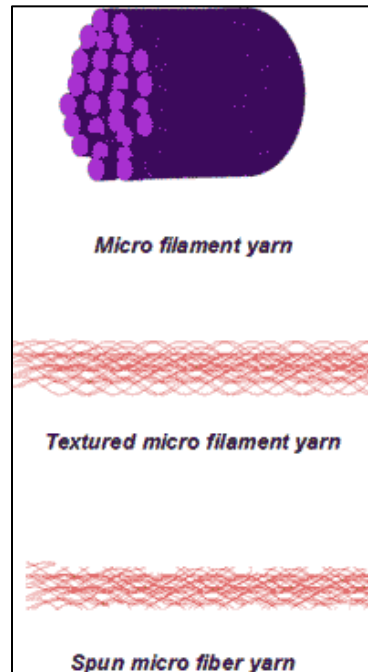


Fig 1.1 Microfiber yarns

Wishing you a great week ahead!

Technical Tuesdays is a knowledge sharing initiative by Resil Chemicals Private Limited
arc@resil.com | www.resil.com.