

The Alsico Mask explained

At Alsico we have years of experience with masks used in cleanroom environments. We leveraged this knowledge now into the proprietary design of a high-tech Community mask.

Let's go through some details:

The Fabric

The fabric we use for the Alsico masks is made out of a 'tightly woven low linting polyester filament yarns with a carbon grid'.

The Polyester is a synthetic fibre with some great advantages for these applications. Polyester is lightweight, strong and doesn't absorb much moisture. Moisture is an environment preferred by bacteria and viruses. It is also very comfortable, as most sportswear these days is made out of this raw material. The disadvantage is that it can easily be static charged, that's why we put the carbon grid in there to avoid this static charging.

The yarns used for this polyester fabric are filament yarns. This means that the yarns are not made out of different short fibres like e.g. cotton, but are one long yarn (comparable to a long spaghetti thread or a fishing line). By using these type of yarns we prevent 'linting'. Linting are very small particles that come off fabrics when you use them. Small in this case is between 0.3-5 μ (so invisible for the human eye). These small particles are possible transportation systems for viruses or bacteria as they can not move out of themselves. Most cottons are not 'low linting' and that's why in operation theatres they don't use cotton, in order to avoid that these particles could infect patients during an operation.

When woven out of filament yarns the fabric has a more even construction on every surface, as the filament yarn is more regular than a fibre spun yarn. You can also make a tighter woven fabric and this improves your filtration efficiency. When you look at the fabric with a microscope you will see open parts between the yarns in warp and in weft. This makes the fabric breathable. However, the bigger and uneven these holes are, the less efficient the filtration will be. With our fabrics we filter > 75% of the small particles of 0.3 μ -5 μ and when we look at the particles above 5 μ we score even above 90%.

And last but not least you can wash this at high temperatures like 80°C up to 100 times.

The design

Important for a good working mask is that it fits to your face. Therefore we have developed a system where the ribbons slide through the mask so they can be adjusted to every body's face and then fixed with a cord lock.

It couldn't be more easy: just slide and fix!

I would not choose another mask than the Alsico Mask!