Use of Mahlo measuring technology for meltblown nonwovens

Before the worldwide spread of the corona virus, you had to talk to medical personnel if you wanted to learn about the usage properties of mouth-nose protection masks. Due to the current circumstances, we are now all experts, as we use these masks more or less daily.

Fig. 1: Mouth and nose masks are currently part of everyday life.

But regardless of whether we have to use them privately or professionally - two factors play a major role in the products:

1. Wearing Comfort

We want to be able to breathe freely in every activity we perform with the mask. At the same time the material should be light and comfortable to wear. Therefore, both the air permeability and the basis weight of the non-woven fabric are of utmost importance.

2. Protection

For all its comfort, the mask must protect us and our companions from contaminated aerosols. So the optimum balance between protection and comfort must be maintained.

Quality control system Qualiscan QMS-12

Nonwovens for mouth and nose protection are usually produced using the meltblown technology. During the manufacturing process, the above mentioned important parameters basis weight and air permeability are monitored online with the Qualiscan QMS-12 quality control system. Immediately after web formation, the sensors for measurement travel continuously across the nonwoven web and record the values in the cross profile. The key figures are transmitted in real time to the process control. Thus, the system can intervene in the process at any time and reliably maintain the narrow tolerance limits.

mInfo Meltblown Meta
11/2020

Measurement technology

The measurement technology for the basis weight offers us various alternatives, from the classic beta or X-ray measurement to infrared absorption measurement, with which it is even possible to monitor the fibre mixing ratios. Air permeability is measured by a sensor that measures the air flow through the nonwoven by means of negative pressure.

Fig. 2: Measuring with Qualiscan QMS-12

Thanks to these achievements we can be confident that the supply of reliable masks in large numbers is assured - although we hope that in the not too distant future they will again be reserved exclusively for medical personnel.

Customer benefits

- Contactless basis weight measurement with Gravimat DFI beta sensor (10 - 6000 g/m²)
- Contactless basis weight measurement with Gravimat FMX / Gravimat FMX-T X-ray sensor (5 - 20,000 g/m²)
- Accurate air permeability measurement with Airpro APM permeability sensor
- Optimum protection and best possible wearing comfort thanks to controlled parameters

Further Questions? Ask our expert!

Fig. 3: Matthias Wulbeck

Matthias Wulbeck, our product manager for QCS will be happy to help you. Just talk to us!

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