



Is the SilentCare also suitable for allergy sufferers?

Many people are affected by allergies nowadays. The trigger can be a biogenic, chemical and particulate pollutant.

The VDI Guideline 6022 Sheet 5 describes requirements for the testing and assessment of technical equipment provided to prevent allergenic exposure. Among other things, portable air cleaners are also dealt with.

All the methods described there do not achieve absolute allergen or pollutant removal. However, they are capable of reducing exposure if used properly.

An important requirement is that consumers without prior technical knowledge and with common household tools (e.g. screwdriver) should be able to carry out maintenance activities such as changing filters. This is the case with SilentCare.



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The separation efficiency

The VDI Guideline 6022 deals with the separation of aerosols (liquid and solid particles) in the size range below 0.01 mm (10 µm) is sealed with. They can also be carriers of allergens.

Mould spores (2 - 300 µm), pollen (many are between 10 and 100 µm) and other protein particles can also trigger allergic reactions.

The filter material of the SilentCare corresponds to the separation class H14 according to the EN 1822 standard, which means that the filter material must separate at least 99.995 % of the particle size that is to be filtered worst. This value (MPPS) is usually between 0.10 µm and 0.19 µm. Larger and small particles are separated more easily. Refer to curve 1.

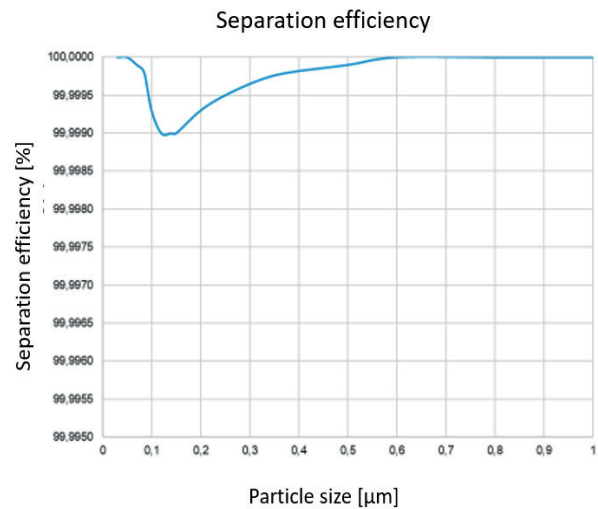
The SilentCare was also tested according to the test method GB/T 18801 at the test institute IUTA in Duisburg (approved test centre according to TA Luft). This test method with the complete unit shows an extremely good separation performance at 0.12 µm. Refer to curve.

Conclusion

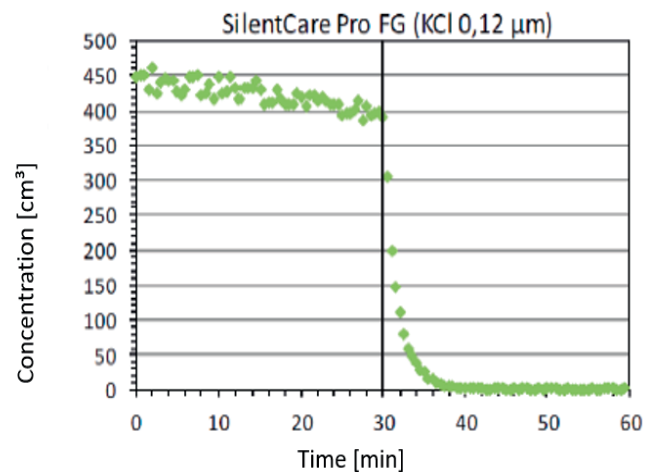
Due to the extremely good separation of the filter element, it can be assumed that almost no allergy-causing aerosols (particles) are present in the filtered air.

The filter material is a three-layer structure and consists of polyester fibres on the outside and glass fibres in the actual filter layer. These are predominantly water-repellent, so that fungi and other organisms can grow poorly or not at all on the material. The adhesive of the filter element has been approved for use with foodstuffs and can therefore be considered harmless.

We would like to point out that the SilentCare has not been tested by an independent testing institute according to the guideline VDI 6022 part 5. The suitability of the SilentCare for the separation of allergenic aerosols was derived from existing data of other standards.



Curve 1: Separation efficiency of an H14 (standard EN 1822) filter material



Curve 2: Left side 30 minutes without filtration, Then filtration is started (right side) and already after seven minutes the particle count is almost „zero“.

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