**Test protocol information sheet – SM-98-1 face mask**

## 1. Test performed

**Flat sheet efficiency test – 99% efficiency on 3 micron.**

The face mask we offer is tested in our laboratory. The DEHS Particle Filter Efficiency test, performed on a flat sheet test-rig, shows the efficiency of the filter material is above standard. (type II according to EN 14683).

**AFPRO Filters BV**

**FS-020-044 REPORT**

| | | | |
|---|---|---|---|
| **Media type:** | 25 gsm PP meltblown - surgical media | **Test date:** | 27-5-2020 |
| **T (℃):** | 23,8 | **RH (%):** | 44,3 |
| **Test aerosol** | DEHS | **Pressure drop** | |
| **Flow (L/min)** | 72,2 | **Filtration area:** | 150cm2 |

| Partical size um | | Efficiency, % Pressure drop and Dust fed Pa g | | | | | |
|---|---|---|---|---|---|---|---|
| Segment | Avr. | 21,1 Pa 0 g | 22,1 Pa 0 g | 20,6 Pa 0 g | 20,4 Pa 0 g | 0 Pa 0 g | 0 Pa 0 g |
| 0.20-0.30 | 0,24 | 79±5,3 | 78±3,8 | 74±0,4 | 87±1,5 | | |
| 0.30-0.50 | 0,39 | 88±2,3 | 87±1,5 | 84±0,3 | 91±1 | | |
| 0.50-0.70 | 0,59 | 94±1,1 | 94±0,7 | 92±0,3 | 95±0,5 | | |
| 0.70-1.0 | 0,84 | 96±0,8 | 96±0,2 | 94±0,4 | 97±0,3 | | |
| 1.00-3.00 | 1,73 | 99±0,1 | 99±0,1 | 98±0,1 | 99±0,1 | | |

Note：The uncertainty of the measured efficiencies is reported on a 95% confidence level.

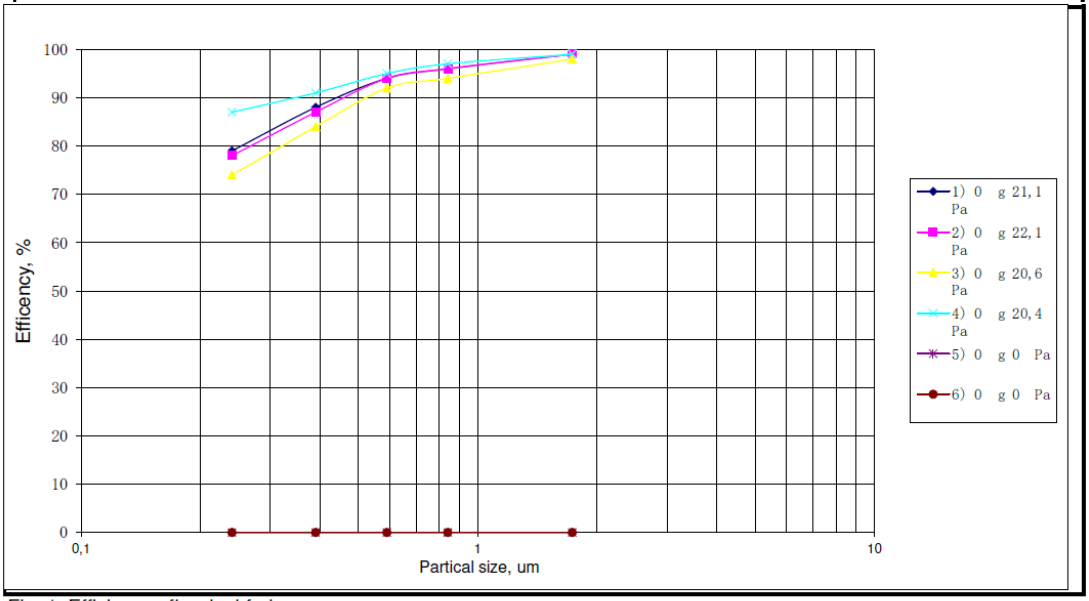
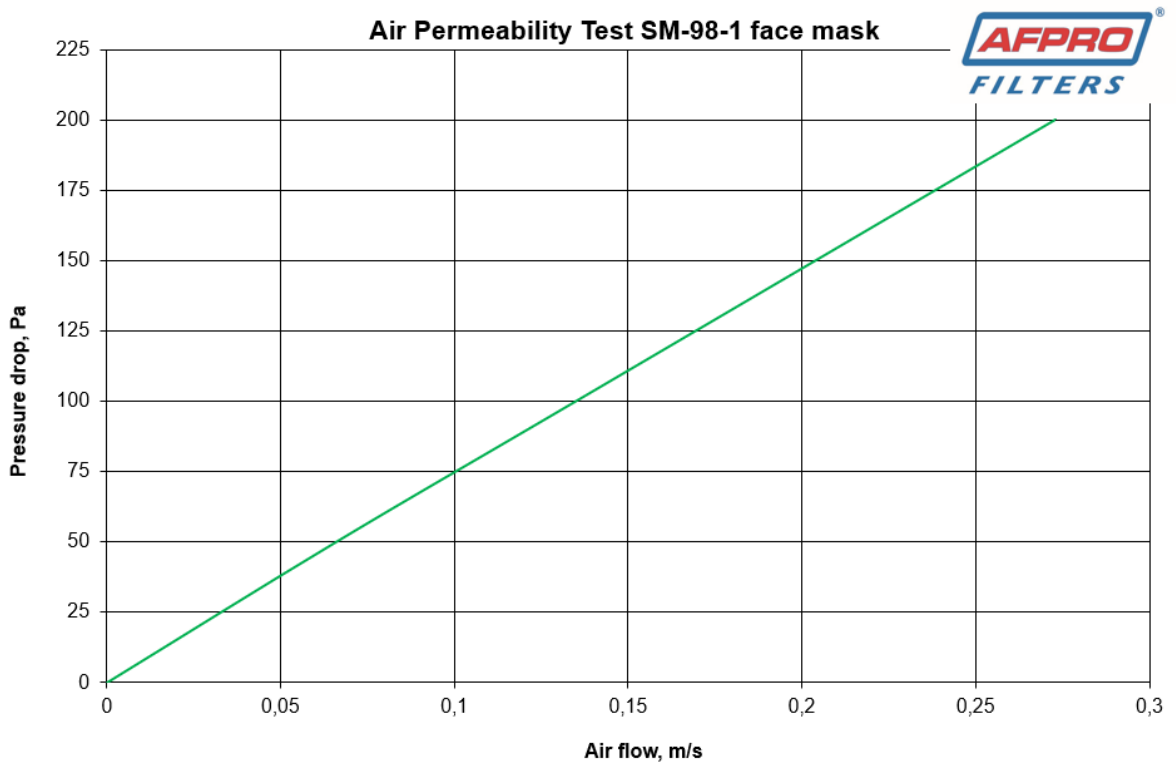



Fig. 1: Efficiency after dust fed

Please note: The test results are only valid as far as the mentioned test methods are concerned and only for the filter which was placed to our disposal. The performance results are only valid for the tested item and cannot by themselves be quantitatively applied to predict performance in service.

**Permeability / breathability test**

In order to ensure breathability and comfort during wearing we have performed and test to ensure these factors. In below graph you can see the relation between airflow and pressure drop of the media.



## 2. Additional tests scheduled

The facemasks are currently enrolled in a testing program of the laboratory of HEX Group in Belgium. Within June, this laboratory will communicate the results on following tests, all according to European standards.

- Bacterial Filtration Efficiency (BFE) – according to EN 14683:2019
- Differential pressure (breathability) – according to EN 14683:2019
- Microbial cleanliness – according to EN ISO 11737-1:2018

## 3. Splash resistance test (IIR according to ISO22609)

When desired and upon request, we could also perform a Splash resistance test (ISO 22609:2004). We are currently cooperating with Nelson Labs (USA) which could perform this test. They could be able to share the results of this test within 8 weeks.

Additionally we are constantly looking for laboratoria that can perform test quicker then the current time schedule

| Test | Type I [a] | Type II | Type IIR |
|---|---|---|---|
| Bacterial filtration efficiency (BFE), (%) | ≥ 95 | ≥ 98 | ≥ 98 |
| Differential pressure ($Pa/cm^2$) | < 40 | < 40 | < 60 |
| Splash resistance pressure (kPa) | Not required | Not required | ≥ 16,0 |
| Microbial cleanliness (cfu/g) | ≤ 30 | ≤ 30 | ≤ 30 |