
AIRCARE

AIRCARE+ Factsheet

AIRCARE+ MASKS are an award winning range of protective hybrid N99/FFP3 face masks that can be decontaminated and reused. They protect the wearer‘s respiratory tract against minute particles and biological pathogens in the inhaled air. So the wearer is always protected as much as possible and with highest level of comfort.

Wearing comfort, self-protection and safety depend primarily on proper and professional cleaning and disinfection of the **AIRCARE+ 3ONE** protective mask. Proper hygiene of the mask is not only closely related to protection and well-being for the user but in many cases is mandatory from an occupational health and safety perspective.

No single product design on the market today fits all personal preferences and performance needs so it is imperative that healthcare professionals make a judgement according to their given situation. BUT we believe that the **AIRCARE+ 3ONE** is the best reusable solution on the market for both wearer and patient.

Reusable Medical Facemask

Necessity and new regulations make medical facemasks a permanent requirement to protect healthcare professionals and patients.

Furthermore healthcare professionals and especially employers need to make a risk assessment associated with the planned procedure for personal, employee, institutional and third party protection.

The **AIRCARE+ 3ONE** mask provides the very best protection results for patients, healthcare professionals and institutions.

AIRCARE+ 3ONE is the new standard in medical facemasks designed for comfort, is reusable and can be decontaminated making it the 'best in class' ROI for HCP's for protection against coronavirus and other airborne diseases.

Award Winning

Designed to protect both patients and frontline health professionals from airborne infections.

GERMAN INNOVATION AWARD '21 WINNER

reddot winner 2021

https://www.german-innovation-award.de/en/winners/preis/gewinner/aircare/
https://www.red-dot.org/project/aircare-51928

Comparison to Standard FFP3/N99 Masks

	AIRCARE+	Standard FFP3/N99
Cost effectiveness	1 reusable mask, 2 filters per day (recommended) 2 x 365d = 780 filters	2 masks (single use) per day (recommended) 2 x 365d = 780 masks
Protection	filtering 99.8% aerosols	filtering 95% aerosols (only when fit tested)
Materials	no metal, no corrosive materials	metal nose clip: corrosion, breakage, risk of injury
Humidity	Moisture and rain do not affect the mask. Simply dry the mask, replace the filter and the mask is ready to use again.	Humid, wet and rainy conditions render the mask ineffective
Lifetime	**10 years service life** **1.000x sterilizable**	**Single use** **5-8 hours**
Weight	49g mask plus 1g per filter Mask and 100 filters = 149g this corresponds to 50 days of use	average 18g per mask 100 masks = 1,800g this corresponds to 50 days of use
Waste	10,000 persons à 2 filters per day: **7.3 tons of waste per year**	10,000 persons à 2 masks per day: **131 tons of waste per year**

American Society for Testing and Materials

ASTM Standard Specification for Performance of Materials Used in Medical Face Masks

This standard covers the performance requirements and test methods for materials used to construct medical face masks and masks used in providing healthcare such as surgery and patient services ASTM level 3 being the highest test level.

ASTM levels standards are assigned based on material performance in filtering both large droplets and also aerosols. However, these test specifications do not evaluate all aspects of medical face mask design such as; barrier properties, breathability and respiratory protection regulations.

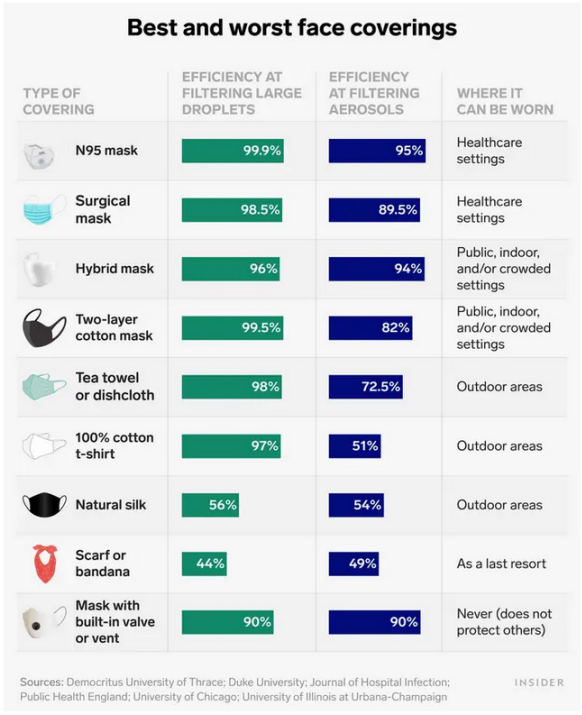
The award-winning design of **AIRCARE+** goes beyond the ASTM level 3 guidelines by using a medical grade silicone reusable body and specialised reusable filters that block large droplets along with smaller airborne particles and is optimise for breathability and respiratory protection.

HCP traditional surgical masks (ASTM level 1) are now considered unfit for purpose in healthcare settings so many hospitals' policies have been updated to run an N95 Mask (ASTM level 3) mandatory fit test procedure designed to ensure the masks do not leak and are well fitted so both the medical professional and patient are protected. Some medical facilities still do not fit test putting all parties at risk.

The **AIRCARE+** mask does not need a fit test due to its clever award-winning design and the use of medical grade silicon which saves time and money on fit testing.

Also ensuring that the HCP is legally compliant and following operational policy.

AIRCARE+ THE NEW STANDARD IN FACEMASKS for coronavirus protection.



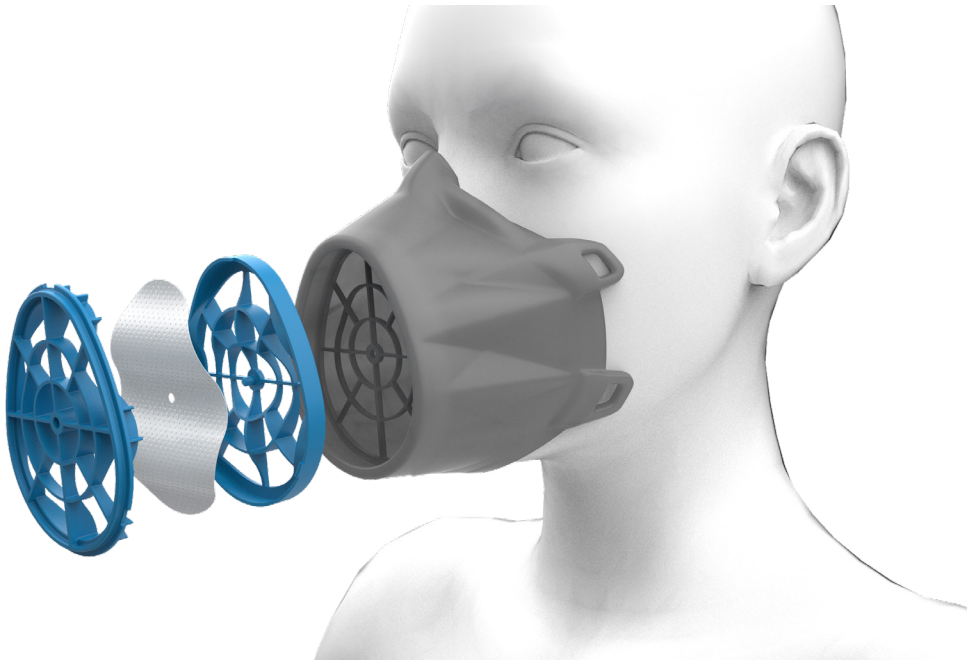
Yuqing Liu/Business Insider

https://www.businessinsider.com/best-masks-for-coronavirus-chart-2020-9

ROI - Waste Reduction Saves Money

The Covid-19 pandemic is estimated to generate up to **7,200 tons of medical waste** every day, much of which is disposable masks. That toll could be cut dramatically by Frontline & Military Services personnel adopting reusable masks.

According to a new study from MIT “reusable silicone N95 masks could reduce both the costs and environmental waste **by at least 75 percent**, compared to using a new mask for every encounter with a patient”.



According to their analysis, if every health care worker in the United States used a new N95 mask for each patient they encountered during the first six months of the pandemic, the total number of masks required would be about 7.4 billion, at a cost of **$6.4 billion**. This would lead to 84 million kilograms of waste (the equivalent of 252 Boeing 747 airplanes).

From the same report the MIT study also found that “Those numbers can be **reduced significantly with a reusable, silicone N95 mask**, especially if the filters were also reusable.” The researchers estimated that over six months, this type of mask could **reduce costs to $831 million** and waste to 1.6 million kilograms (about five 747s).

AIRCARE+ 3ONE is the new standard in medical face-masks designed for protection and comfort. It can be decontaminated and reused time and time again - waste reduction also saves money.

The **AIRCARE+** mask reduces cost by removing the need to conduct mandatory single use N95 fit testing due to its clever design. In turn saving hours in procedural time for the healthcare professional and supporting operational staff.

MIT Research Opportunities Program, the National Institutes of Health, and MIT’s Department of Mechanical Engineering

https://news.mit.edu/2021/covid-masks-environment-0720

Testimonial

Prof. Dr. Ojan Assadian, DTMH (Lond.)
Medical Director Provincial Hospital Wiener Neustadt

University of Huddersfield - Professor of Skin Integrity & Infection Prevention

President of the Austrian Society for Infection Control, co-editor and reviewer of international journals, editor and author of two reference text books in the field of infection control and author of more than 150 published peer-reviewed articles in international medical journals.

„Dear Aircare+

Thank you once again for the sample mask which we have examined with our hygiene experts in the crisis team of the Lower Austrian LGA and we are pleased to provide you with the following feedback: 1. the material of the ASM is very comfortable to wear 2. the mask has interestingly a very tight fit on the face which ensures, for wearers of glasses, is a very special advantage, as the glasses do not fog up due to the tight seal. I am very impressed with the thin filter. The commercially available FFP3 masks are much thicker and designed so that they more or less lie against the skin and by thick cover layers to prevent destruction of the filter material by rubbing, among other things, on beard stubble. With your mask, this cover layer can be omitted and through the setup, the filter does not touch the skin in any case. No other mask has this advantage. Thank you for the test results. The filter performance exceeds that of the FFP3 standard by far. The flame test (calibration office) and the much more modern test by means of particle generator at the Federal Army have not only confirmed the values of the classification according to FFP3 values, but produced best performance. Note: We are currently testing the long-term effects of masks.

We are amazed at how harmful conventional masks are. The filter material is usually meltblown a very fine synthetic fibre as you know. When these filters are subjected to mechanical stress, the very fine fibres - caused by the drying process during manufacturing - break into small particles. The cover material cannot completely keep these fine fibres out. As a result, a large number of these very fine, very small plastic particles are inhaled, because with conventional masks, mechanical stress cannot be prevented at all. The fact that many people put on these masks several times or put them in their jacket pocket in between is not new knowledge. What this means in terms of health has not yet been researched, nor has it been pointed out. In our opinion, lung cancer will be an issue in the future. It will probably be very difficult for an employer who has prescribed such masks for his employees to argue his way out of responsibility. Especially since there are already precedents (Xylamon, Xyladecor, Lindan and Eternit - asbestos) which have ended up destroying the existence of those responsible at the time. Since this mechanical stress does not occur with your mask, this danger is averted”

Testimonial

Additional feedback from: Vamed Hospitals and medical clinics in Upper Austria:

The masks were worn and tested there in intensive care unit shifts. 5 AirCare+ and in parallel 5 conventional FFP3 masks. The feedback was outstandingly good. In contrast to the conventional mask, there were no skin irritations with the **AIRCARE+ 3ONE**. The mask is absolutely tight and protects so effectively.

Healthcare & Professionals Trust AIRCARE+