



The future of respirators

Foldable respirator with reduced breathing resistance and low weight - completely made in Denmark. (EU)

Easy to carry, transport and store.



Development

The Covid-19 pandemic, which was spreading rapidly in 2020, led to an unprecedented demand for protective equipment - in particular protective masks of the classes FFP2 and FFP3. In addition to procurement, other problems soon became apparent - a lack of functionality, falsified or invalid certifications, and the dependency on the Far East - especially on China. Workers in factories and on construction sites have long been complaining about a known problem that existed before the pandemic - the increased stress caused by the breathing resistance of the masks.



The principal reason for HCM Global to start developing a product line as early as May of last year - the EASY BREATH PRODUCT LINE - was the lack of breathability in accessible masks.

During the entire development process, there was close cooperation with FORCE TECHNOLOGY A/S Denmark and FORCE CERTIFICATION A/S (Notified Body 0200).

EASY BREATH FFP2 NR D NANO Tech mask was finally certified by the only authorized test center in Denmark. We are proud to introduce the article series FFP2 NR D NANO Tech EASY BREATH mask, which is entirely produced in Denmark. Thus a local controlled and produced FFP2 NR D NANO mask finally becomes a reality.

Taiwan News

US seizes more than 11 million fake Chinese N95 masks

Department of Homeland Security officials said counterfeit items have been seized in five states

<https://www.taiwannews.com.tw/en/news/4131245>

DR NYHEDER DRTV DR LYD PENGE

Masker for millioner kasseret på hemmeligt lager: Region svindlet under coronakrisen

Vildledende certifikater har været med til at oversvømme Europa med dårlige værnemidler på det værst tænkelige tidspunkt.

[Masker for millioner kasseret på hemmeligt lager: Region svindlet under coronakrisen | Penge | DR](#)

The Brussels Times

Revealed: Chinese companies flooded world market with fake face masks

The paper reveals that importers were the first to be taken in by unscrupulous manufacturers in China, who stopped at nothing to convince them to buy masks, including fake certificates and even hand-stencilled EU approval signs.

<https://www.brusselstimes.com/news/business/118774/revealed-chinese-flooded-world-market-with-fake-face-masks/>

Fake Masks 33 mio. pages:

[fake chinese masks - Google-søgning](#)



THE PROPERTIES

Protective function

The FFP2 NR D NANO Tech. protects against solid and liquid particles as well as fine dust. Favored use: Industry, craft, agriculture and the service sector. Since the beginning of the pandemic, it has also been used in the healthcare sector. Certified according to the EU directive EU 2016/425 type test EN 149: 2001 + A1: 2009 Module B + C2, CE by Force Certification A/S, Denmark (Notified Body 0200)

HCM Global will keep developing our products in an innovative manner and will introduce new qualities and functionalities to the market.

The filter system

The nano-filter works through mechanics (interception, diffusion and impaction). Large to very fine particles are blocked and trapped. The substances used to manufacture the filter are harmless according to the REACH regulation. (see safety data sheet)

The mask is further Dolomite Clogging test certified

Healthcare feather light high-tech

FFP2 NR D NANO tech. mask

containing only 3 layers



01

Outer layer

PET/PP/EVA/PVDE:
to provide nice
appearance and
softness for nice touch.
Allergy tested.

02

Middle layer

PET/PP/EVA/PVDE:
NANO Tech Layer
providing optimal high
air permeability yet
meeting the high filter
efficiency ACC to FFP2,
and far better, due to
Nano rather than
meltblown. Allergy
tested.

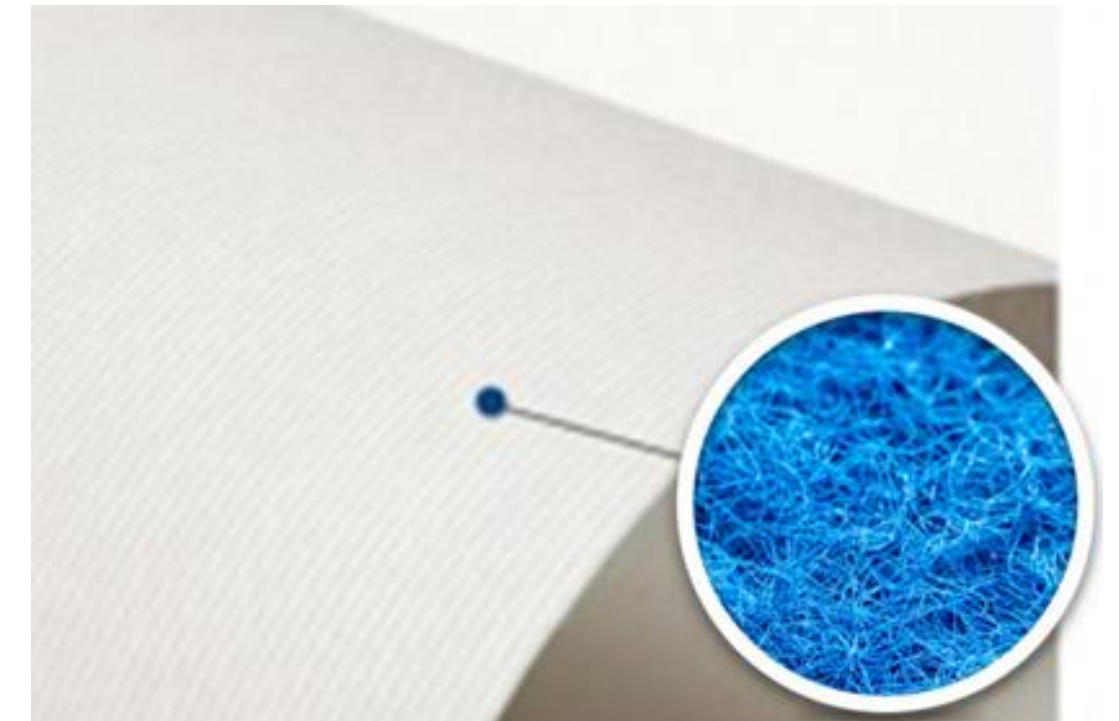
03

Inner layer

PET/PP/EVA/PVDE:
to provide softness
towards the face.
Allergy tested.

The filter system

Unlike other FFP2 masks, the FFP2 NR D NANO Tech. Consists of 3 and not 5 or 6 layers like a standard FFP2. Nevertheless, it protects more effectively. This is made possible through the use of nano-technology, specifically very fine nano-fibers. These enables the production of mesh sizes that are up to ten times smaller than conventional fibers. This therefore enables effective protection with a very low breathing resistance. With normal melt fleece filters, the electrostatic charge on the mask plays an important role in the filtering process. However, a melt fleece filter wets through much faster than a nano filter. Electrostatic charge doesn't count for the FFP2 NR D NANO Tech.



FFP2 NR D NANO tech. comparison

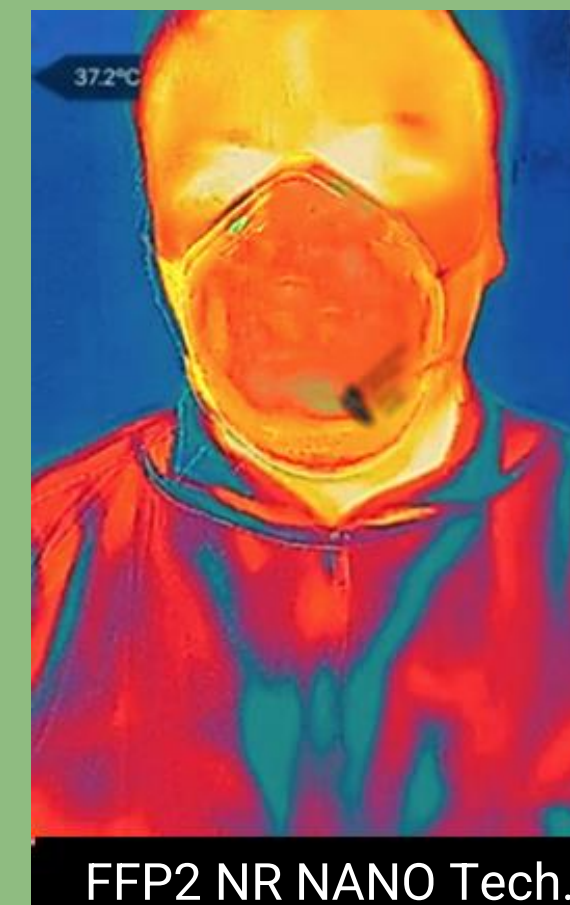


Category	Statutory requirement	Usual FFP2	FFP2 NR D NANO Tech.
Filtering rate	≤ 94%	95-94%	Ø 97,5%
Total leakage	≤ 8%	7 - 8%	Ø 4,67%
Maximal passage of test aerosol by 120 mg NaCl and paraffin oil	≤ 6%	5-6 %	Ø 2,5%
Breath resistance inhalation 30 l per minute	≤ 0,7mbar	0,6 - 0,7 mbar	Ø 0,38 mbar
Breath resistance inhalation 95 l per minute	≤ 2,4mbar	2,2 - 2,4 mbar	Ø 1,7 mbar
Breath resistance exhalation 160 l per minute	≤ 3,0mbar	2,8 - 3,0 mbar	Ø 1,9 mbar

The effect

The FFP2 NR D NANO Tech. makes it possible to work longer without getting tired, thanks to the reduced breathing resistance (see values in the table).

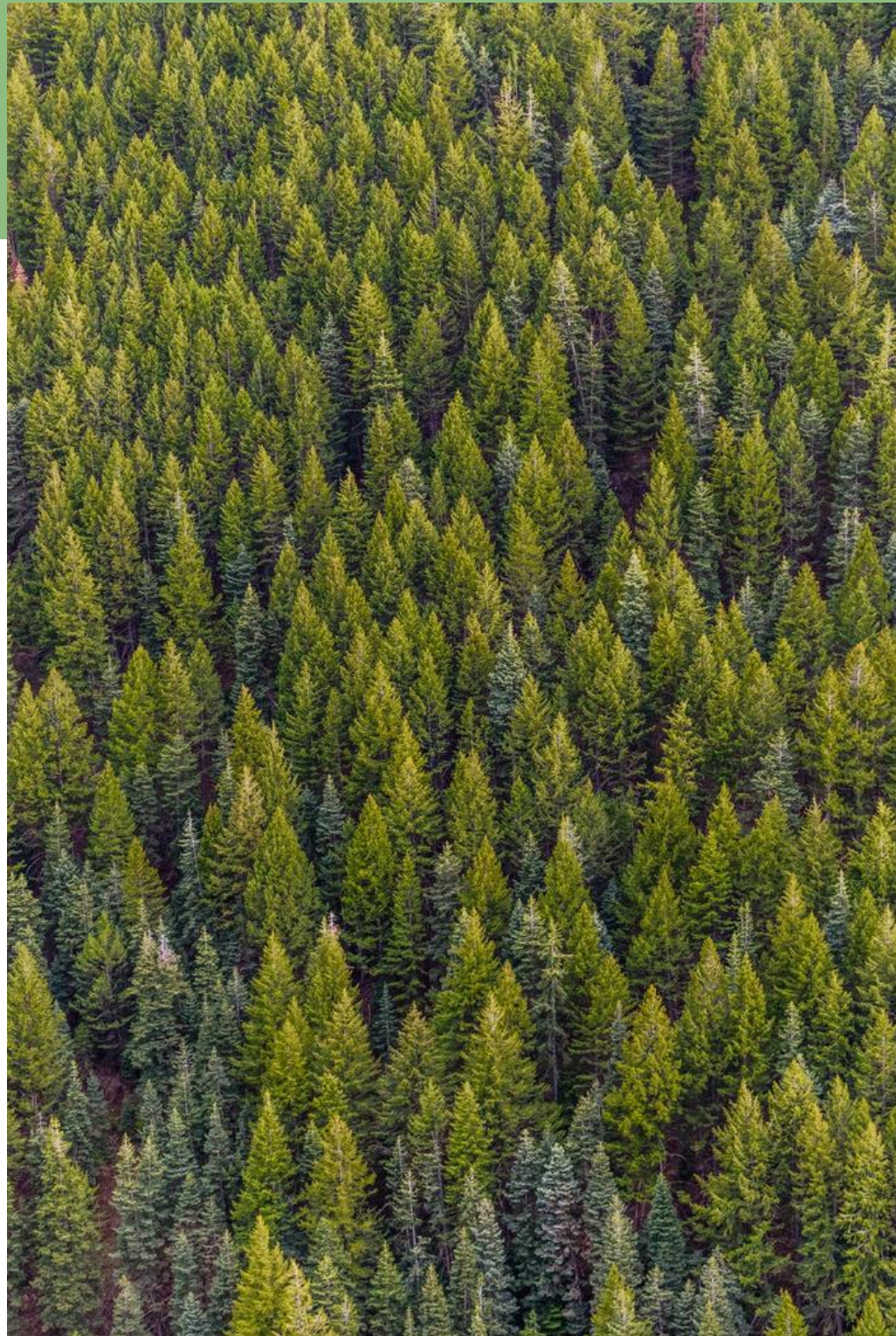
Safety masks with a valve – sometimes - have reduced breathing resistance, but only to protect the wearer, none other surrounding the wearer. Below you can see a thermal camera illustration. The FFP2 NR D NANO Tech releases the heat through the filter, contrary to normal FFP2 & KN95 masks, hence the user can wear the FFP2 NR D NANO Tech unaffected for an extended period due to the EASY BREATH system with low breathing resistance.



FFP2 vs Easy Breath FFP2 NR NANO Tech.



Category	Usual FFP2	EASY BREATH FFP2 NR D NANO Tech.
Layers	5	3
Technology	Melt blown filter	Nano filter
Weight	6g	4g
Shelf life	2-3 years	5 years
CO2 emissions	High	Low
Article manufacturing	Outside Europe/Far East	In Denmark
Equipment manufacturing	Outside Europe/Far East	In Denmark
REACH-certificate	No	Yes
UVC treated prior to packaging	No	Yes
Single packed	-	Yes



Sustainability



Almost all FFP2 masks available in Europe use raw materials from the Far East or are completely manufactured there. With the FFP2 NR D Nano Tech this is not the case. All filters and raw material being manufactured in Denmark. The actual mask production is at the company's headquarters in Jyllinge (Capital Region of Denmark).

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For comparison: Transporting 100 tons of protective equipment by plane from China to Denmark results in around 2 million tons of CO2 emissions (source: CO2 logistics calculator: CO2 calculator for calculating the CO2 emissions of individual shipments (arktisk.de)). In the case of transport by ship, it is still almost half.



Responsibility

HCM Global APS is currently developing concepts to further improve the company's carbon footprint, be it through the use of recyclable outer packaging or through technical solutions. With a confirmed minimum shelf life of 5 years, compared to 2-3 years for conventional masks, there is currently less waste. The FFP2 NR D Nano Tech. is licensed by the Nordic Ecolabel / the Nordic Swan, the eco-label of the Nordic countries. Decisive for the preservation are environmental, quality and health arguments, but also the guarantee of free trade and the proportionality of costs and benefits of the respective products. HCM Global has started the process to obtain the Asthma Allergy Nordic Label. This leading consumer label in Scandinavia is used to identify products in which every single component is - continuously - examined for allergenic substances. Labeling is only permitted in the case of harmlessness.



The boxes

Contains 50 pcs FFP2 NR D NANO tech. masks

Dimension:

Width 155 mm

Dept: 137 mm

Height 263 mm

Export cartons contains:

20 pcs inner boxes / 1.000 pcs FFP2 NR NANO tech.

Export cartons sizes:

Width: 800 mm

Dept: 280 mm

Height: 420 mm

Gross weight: 9 kilos



Documents

Material Data Sheet

Please contact us for hardcopy.

EC Declaration of Conformity

Please contact us for hardcopy.



Documents

CE Certification

Notified Body 0200
Force Certification,
Denmark.

*Please contact us for hard
copy*

MODULE B

Notified Body 0200
Force Certification
Denmark

Please contact us for hard copy

Dolomite Clogging Test





We bring people together, safely

