

# Respiratory masks

Respiratory masks can be divided into **particle filtering half masks** (also called FFP masks) and **respiratory face masks** as partial or full face mask with **replaceable filter elements** for the **filtration of gases and particles**. For work areas with insufficient oxygen concentration the use of additional **self-contained breathing apparatus** is necessary.

**It's all about your safety.**

You would like to know more? Simply use your smartphone or tablet to access [www.berner-safety.de/masks](http://www.berner-safety.de/masks)

## CERTIFIED RESPIRATORY FACE MASKS

Certified, particle-filtrating respiratory face masks in accordance to EN 149 of levels FFP-2 and FFP-3 for use in the laboratory. According to the application area masks can be used for protection against particles and aerosols when handling cytostatics, working with biological agents and viruses or other hazardous substances. All masks are type-tested and certified in accordance to EU directive 89/686/EEC or PPE EU regulation 2016/425

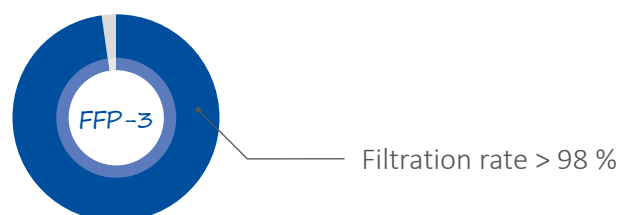
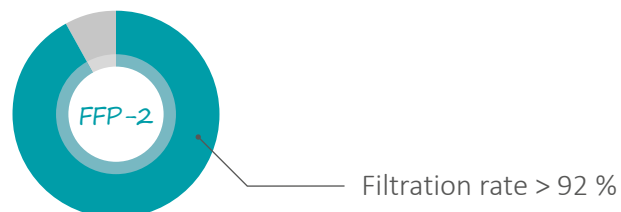
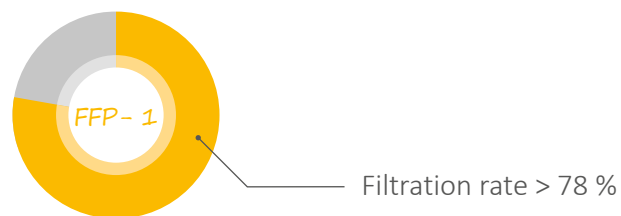
Attention - FFP-masks are unsuitable for gases!

For protection against gaseous substances use a reusable partial or full face mask with an appropriate filter.

## OVERVIEW OF FFP-FILTRATION RATES\*

Example: For a filtration rate of 92 %, 8 % of particles go through the mask (if worn correctly).

\* FFP Classification in accordance to EN 149



## Expert knowledge respiratory masks

### FILTRATION OF NANO PARTICLES

**Filtering half masks serve as respiratory protection against harmful dusts. However, the requirements for the retention capacity of so-called FFP masks described in the European standard EN 149 relate only to microparticles with an average size of 0.4-10  $\mu\text{m}$ . Even smaller and thus especially alveolar nano particles are not taken into account during the test procedure (see Fig. 1).**

More and more nano particles are used in many manufacturing processes, such as the industrial production of cosmetics, in coating processes or in food production. This increases the risk of occupational exposure. Owing to their small size, unbound nano particles can easily enter the body. They can penetrate through the respiratory tract into the pulmonary vesicles, from there into other organs are transported and cause damage (see figure 2). Therefore, preventive protective measures are also required against this dust fraction.

Within the framework of a "Nano" research project, a special test method was developed in cooperation with the University of Milan to test the degree of protection of BLS masks against nanoparticles. Thereby the retaining capacity of the nanoparticles was tested from carbon to metal oxides.

It has been found that the special filter material of BLS masks is capable of retaining more than 97% of nanoparticles. BLS masks therefore offer a respiratory protection, which goes well beyond the requirements of EN 149.

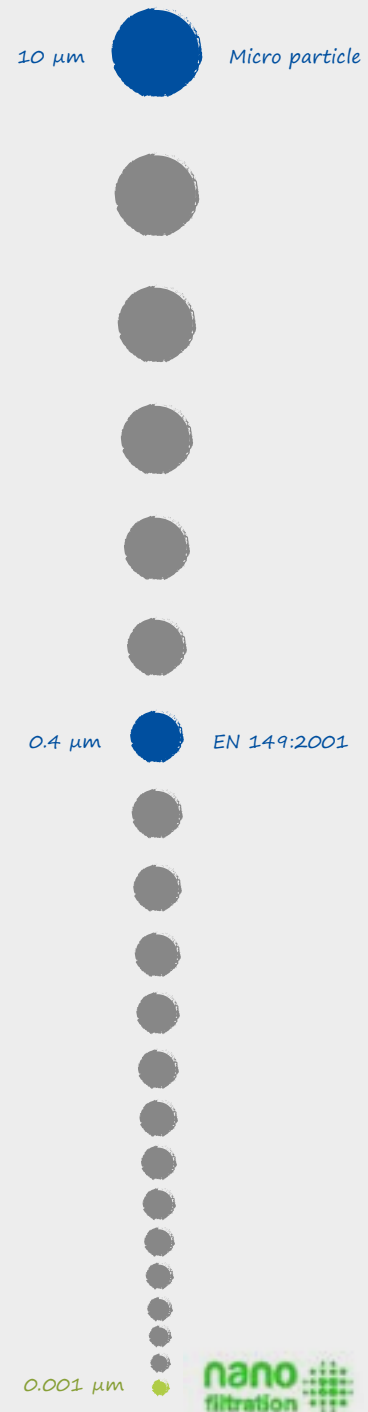


Fig. 1: Filtration of nano particles



## BLS 860

Respiratory folding mask for nano particles up to 0.001 µm

The Berner FFP3 folding respiratory mask BLS 860 provides optimum protection against particles and aerosols. The special filter material fulfills the requirements of EN 149 and also safely retains nano particles up to 0.001 µm. These particles usually penetrate the body very easily due to their small size.

**To order** BLS 860 respiratory folding mask

Size	uni
Order No. (non-sterile- 10 pieces)	100180



## BLS Zero 31

Respiratory mask for nano particles up to 0.001 µm

The FFP3 respirator mask BLS Zero 31 provides optimum protection against particles and aerosols as a moulded mask. A micro mesh on the surface protects the mask from dust accumulation and mechanical damage to the actual filter material.

The special filter material fulfills the requirements of EN 149 and also safely retains nanoparticles up to 0.001 µm. These particles usually penetrate the body very easily due to their small size.

**To order** BLS Zero 31 respiratory mask

Size	uni
Order No. (non-sterile- 10 pieces)	100181



## Surgical mask

Face-mask with elasticated bands

The Foliadress surgical mask from Hartmann is made of hypoallergenic particularly soft and supple non-woven material. It is latex-free, with a special micro-germ filter and has soft elastic bands for fixing behind the ears. The mask meets the requirements of a type II according to EN 14683: 2014 and is latex-free.

**To order** Foliadress face mask loop

Size	uni
Order No. (non-sterile- 50 pieces)	H-9925372



## FFP-3 Respiratory mask

Protection against particles, aerosols and viruses

The pre-shaped FFP-3 respiratory mask with integrated valve and fixed mask body made by Uvex Safety. The new, optimised design of this FFP-3 moulded mask in connection with the soft sealing lip makes it very comfortable to wear while optimising the protective function. This respiratory face mask is suitable for handling with CMR drugs (e.g. cytostatics, virostatics, etc.), biological agents and viruses.

**To order** Uvex respiratory pre-shaped mask FFP-3 D

Size	uni
Order No. (1 piece)	121287



## FFP-3 Respiratory mask

Pre-shaped mask with high wearing comfort

The FFP-3 respiratory mask made by Moldex has an integrated valve and pre-shaped mask body. A sealing lip with elastic straps ensures maximum comfort. Donning and removing of the mask is easy due to the moulded shape and ensures a perfect fit. This face mask is suitable for handling CMR drugs (e.g. cytostatic substances, virostatics, etc.) biological agents as well as viruses.

**To order** Moldex respiratory pre-shaped mask FFP-3 D

Size	uni
Order No. (1 piece)	121262



## FFP-3 Respiratory folding mask

Folding mask for all face shapes

The FFP-3 respiratory folded face mask with integrated valve manufactured by Uvex Safety. Due to the special design this FFP-3 mask the correct fit (and thereby ensuring the protective function) can be easily checked. The elasticated straps at the sides ensure a tight and proper fit of the mask. Also available as a sterile version. The latex-free folding mask is also very space-saving to store.

**To order** Uvex respiratory folding mask FFP-3 D

Size	uni
Order No. (non-sterile - 1 piece)	121285
Order No. (sterile - 4 pieces)	121286



## FFP-3 Respiratory folding mask

Respiratory folding mask without exhalation valve

Developed for working in cleanrooms, in areas where potential particle emissions in the form of respiratory air are to be avoided. The very high protective functions and a perfect fit are the distinguishing features of this mask. The CoolSAFE+™ filter material offers optimum protection.

**To order** Dräger X-plore 1730 respiratory folding mask FFP-3 D

Size	uni
Order No. (1 piece)	121289
Order No. (sterile- 4 pcs)	121297



## FFP-2 Respiratory folding mask\*

Latex-free folding mask with reduced breathing resistance

FFP-2 folding mask made by Uvex for protection against dust, aerosols, and aerosol mist. The mask has passed the dolomite dust test for intense dust generation and is completely latex-free. Suitable for all applications, where FFP-2 filtration is sufficient (see risk analysis).

**To order** Uvex respiratory folding mask FFP-2 D

Size	uni
Order No. (1 piece)	121272



## Respiratory full face mask\*

For professional applications for the highest demands

The Dräger X-plore® 6530 full face respiratory mask has been designed for professional applications. In combination with the appropriate X-plore respiratory filter (Rd40 thread to EN 148-1) the mask provides the perfect protection for various applications, eg. in the chemical or pharmaceutical industry but is also suitable for use in infection protection sets and for use in pathology. Filters exist for virtually all fields of application: We recommend the combi-filter type: 1140 - A2B2E2K2 Hg CO NO-P3 R D. This filter is suitable for many different applications areas and thereby reducing the sources of error as well as storage costs for many filters.

**To order** Dräger X-plore® 6530 respiratory full face mask & Respiratory combi-filter for full face mask X-plore 6000-series

Mask: Order No. (1 piece)	121290
Kombi-filter: Order No. (1 piece)	121291

\*Not available in all countries.