

### Nanologix corporation, s.r.o.

- S. K. Neumanna 1521
  436 O1 Litvínov
  Czech republic
- info@nanologix.eu
- (i) www.nanologix.eu



P R O D U C T L I N E



### RESPIRATORY Masks



### Respira

Respiratory mask with combined inhalation and exhalation valve

#### Mask

**RESPIRA** protective respiratory half-mask created by NANOLOGIX is a new generation half-mask. The development of which was based on reliable functionality combined with a high level of user-friendliness. The basic requirement for the correct function of each half-mask is to ensure a perfect seal between the elastic part of the mask and the face. This seal has been achieved through a process of continual development, which largely involved the optimization of the shapes for each individual part of the mask. The individual dimensions are based on an anthropometric study of the human face, primarily focused on the European population and represent middle values of the morphometric dimensions of the adult human face. Maximum flexibility and the ability to perfectly duplicate the human face are achieved by the contact face of the half-mask adjacent to the users face and the highly flexible nature of its material. The RESPIRA halfmask uses a special type of silicone for the contact face, which has been developed specifically for use in healthcare and therefore meets the strictest requirements. The excellent flexibility of the silicone creates even pressure distribution across the cheeks of the face, thus achieving a seemingly perfect seal while ensuring high comfort levels during periods of prolonged use. In addition, the silicone is characterized by a high resistance to chemicals, ensuring there is no risk of damage to the mask even when in contact with a wide range of chemicals. Another significant advantage of this material is the minimal tendency to permanently deform, allowing for folded storage of the half-mask in small packages. After unpacking, the half-mask returns to its original pre-folded shape and is ready for immediate use. Moreover, due to its extreme resistance to ageing, silicone does not lose its flexibility, which ensures a significantly longer working life. The facepiece of the halfmask, which serves to clamp the filter, is made of a high performance thermoplastic polymer, which is reinforced with a fibrous filler to increase its strength. The material adheres perfectly to the silicone contact face, which is essential to ensure a reliable seal. The bond of the silicone to the facepiece of the half-mask is so strong, that it is able to withstand a considerable mechanical load.





### Respira NANO-PERFECTION Respira perfection

#### Filter

The RESPIRA respiratory half-mask is equipped with a circular filter, which is attached to the facepiece by a threaded joint. The design of the connection makes the replacement of the filter simple and intuitive, without having to remove the mask from the face. This roundthreaded system allows for very quick filter exchange using only one hand. This design feature results from users needs in an emergency situation, where the speed and simplicity of replacing the filter can have a significant impact on the level of protection provided and the user's health. The seal itself at the interface between the facepiece of the half-mask and the filter is provided by a silicone sealing ring, this is anchored to the filter body. Thanks to its properties, this ring ensures a reliable seal throughout the lifespan of the mask, as it does not deform or lose elasticity. The circular filter itself is designed to suit a wide range of different filter materials. In terms of breathability the minimum norm of determined filter area is 150cm2, this is safely met and can be greatly increased by increasing the density of the composition of the filter material. The filter pad is fixed in the filter using a special adhesive. This provides strength to the joint at the

interface of the filter cartridge with the facepiece of the filter and also a perfect seal. The filters of the half-mask are equipped with a variety of filtering materials, as recommended for each type of environment at protection levels P1 to P3. The uniqueness of the RESPIRA filters is based on the intentional non-use of an exhalation valve, and where the exhaled air pressure is used to regenerate the filter pad. This unique system extends the lifespan of the filter in the infected environment, because the exhaled air partially cleans the filter pad from entrapped particles. Our achieved captured capture values are 99.99%



This product, in combination with a corresponding half mask, meets the basic safety requirements of

EN 1827+A1:2009 FM P3 R D, EN 1827+A1:2009 FM P2 R D. EN 1827+A1:2009 FM P1 R D and EN 143:2000/A1:2006 P3 R. EN 143:2000/A1:2006 P2 R. EN 143:2000/A1:2006 P1 R and is marked with the CE1024 symbol.





### **RESPIRA PERFECTION**

FILTRATION CLASS P3 - dust, coarse impurities, toxic liquid and solid aerosols, toxic fumes, bacteria, viruses, radioactive particles, asbestos



- dust, coarse impurities, bacteria and hazardous solid and liquid particles



### Protective mask CM-6M

#### Application of the mask

The CM-6 protective mask together with a suitable filter or breathing apparatus protects user's face, eyes and breathing organs against chemical, biological, radiological and nuclear (CBRN) agents in form of gases, vapours and solid or liquid aerosols. The mask was especially designed for protection of riot control units but is also ideal for protection of rescue teams, fire-fighters and for civil defence and industrial applications.

The mask fully meets requirements of the EN 136 (Class III) and EN 148-1 standards. The CM-6 protective mask is manufactured in one universal size. The construction of the sealing edge ensures perfect tightness to all face shapes and sizes of the adult population, except for extremely small faces.

*Material of the facepiece enables to use the mask for* long periods of time in any weather conditions. The inhalation chambers for filter connection are fitted with the thread Rd 40x1/7" in accordance with EN 148-1 standard (NATO standard).

#### **Parameters**

- Average weight: 560 g
- Number of sizes: 1, Effective field of vision: min. 70%
- Binocular field of vision: min. 80%
- Speech clarity: 95%
- Materials
- Facepiece: bromine-butyl rubber, non-irritating
- Inner mask, other rubber components: natural rubber, non-irritating
- Visor: polycarbonate
- Plastic components: polyoximethylen, polyamid
- Speech diaphragm: PET
- Head harness: rubber-textile
- Filter connection thread: Rd 40 x 1/7"
- Breathing resistance:
- inhalation resistance at 30 l/min max. 25 Pa
- inhalation resistance at 95 I/min max. 80 Pa
- exhalation resistance at 30 l/min. max. 50 Pa





#### **Product details**

The respirator provides protection from dust and liquid aerosols.

#### Materials

The following materials are used in the manufacture of the respirator: Straps - Natural rubber (caoutchouc) Nose clip - Polypropylene / Iron wires Filtering and Covering Media - Polypropylene / Nanofibres

#### Standards

The respirator has been tested to European standards EN 149: 2001 + A1: 2009 and has met the requirements of the FFP1 category. The respirator may be used in an atmosphere containing up to 4 times the exposure limit (OEL) of the contaminant particles.

#### Warning/Caution

- The user must be trained in the correct way of using the product.
- Use only in well-ventilated areas.
- Respirators should not be used by persons whose face contours, deep scars or other facial deformations prevent adequate sealing which must be formed between the respirator and the face.
- It is necessary to discard the respirator and replace it if it becomes damaged or if breathing becomes troublesome.
- The respirator should not be cleaned; it is intended only for disposable use.
- The effectiveness of the respirator depends on aerosol concentration and the intensity of the user's physical activity.
- The respirator must be disposed off after a single use.
- The respirator does not protect the user against gases, vapours, or in an environment where the oxygen concentration is less than 17% of the volume.
- Make sure that the respirator is not damaged before use.

Nose clip -Polypropylene/ Iron wires

> Filtering and Covering Media - Polypropylene/ Nanofibres





#### **Product details**

The respirator provides protection from dust and liquid aerosols.

#### Materials

The following materials are used in the manufacture of the respirator: Straps - Natural rubber (caoutchouc) Nose clip - Polypropylene / Iron wires Filtering and Covering Media - Polypropylene / Nanofibres Exhalation Valve - Polypropylene / Natural Rubber / Nanofibres

#### Standards

The respirator has been tested to European standards EN 149: 2001 + A1: 2009 and has met the requirements of the FFP1 category. The respirator may be used in an atmosphere containing up to 4 times the exposure limit (OEL) of the contaminant particles.

#### Warning/Caution

- The user must be trained in the correct way of using the product.
- Use only in well-ventilated areas.
- Respirators should not be used by persons whose face contours, deep scars or other facial deformations prevent adequate sealing which must be formed between the respirator and the face.
- It is necessary to discard the respirator and replace it if it becomes damaged or if breathing becomes troublesome.
- The respirator should not be cleaned; it is intended only for disposable use.
- The effectiveness of the respirator depends on aerosol concentration and the intensity of the user's physical activity.
- The respirator must be disposed off after a single use.
- The respirator does not protect the user against gases, vapours, or in an environment where the oxygen concentration is less than 17% of the volume.
- Make sure that the respirator is not damaged before use.

Straps

- Natural rubber







#### **Product details**

The respirator provides protection from dust and liquid aerosols.

#### **Materials**

The following materials are used in the manufacture of the respirator: Straps - Natural rubber (caoutchouc) Nose clip - Polypropylene / Iron wires Filtering and ca

#### Standards

The respirator has been tested to European standards EN 149: 2001 + A1: 2009 and has met the requirements of the FFP2 category. The respirator may be used in an atmosphere containing up to 12 times the exposure limit (OEL) of the contaminant particles.

#### Warning/Caution

- The user must be trained in the correct way of using the product.
- Use only in well-ventilated areas.
- Respirators should not be used by persons whose face contours, deep scars or other facial deformations prevent adequate sealing which must be formed between the respirator and the face.
- It is necessary to discard the respirator and replace it if it becomes damaged or if breathing becomes troublesome.
- The respirator should not be cleaned; it is intended only for disposable use.
- The effectiveness of the respirator depends on aerosol concentration and the intensity of the user's physical activity.
- The respirator must be disposed off after a single use.
- The respirator does not protect the user against gases, vapours, or in an environment where the oxygen concentration is less than 17% of the volume.

• Make sure that the respirator is not damaged before use.

Nose clip -Polypropylene/ Iron wires

Filtering and Covering Media - Polypropylene/ Nanofibres



#### **Product details**

The respirator provides protection from dust and liquid aerosols.

#### Materials

The following materials are used in the manufacture of the respirator: Straps - Natural rubber (caoutchouc) Nose clip - Polypropylene / Iron wires Filtering and Covering Media - Polypropylene / Nanofibres Exhalation Valve - Polypropylene / Natural Rubber / Nanofibres

#### Standards

The respirator has been tested to European standards EN 149: 2001 + A1: 2009 and has met the requirements of the FFP2 category. The respirator may be used in an atmosphere containing up to 12 times the exposure limit (OEL) of the contaminant particles.

#### Warning/Caution

- The user must be trained in the correct way of using the product.
- Use only in well-ventilated areas.
- Respirators should not be used by persons whose face contours, deep scars or other facial deformations prevent adequate sealing which must be formed between the respirator and the face.
- It is necessary to discard the respirator and replace it if it becomes damaged or if breathing becomes troublesome.
- The respirator should not be cleaned; it is intended only for disposable use.
- The effectiveness of the respirator depends on aerosol concentration and the intensity of the user's physical activity.
- The respirator must be disposed off after a single use.
- The respirator does not protect the user against gases, vapours, or in an environment where the oxygen concentration is less than 17% of the volume.
- Make sure that the respirator is not damaged before use.

Straps

- Natural rubber







#### **Product details**

The respirator provides protection from dust and liquid aerosols.

#### Materials

The following materials are used in the manufacture of the respirator: Straps - Natural rubber (caoutchouc) Nose clip - Polypropylene / Iron wires Filtering and Covering Media - Polypropylene Exhalation Valve - Polypropylene / Natural Rubber / Nanofibres

#### Standards

The respirator has been tested to European standards EN 149: 2001 + A1: 2009 and has met the requirements of the FFP2 category. The respirator may be used in an atmosphere: containing up to 12 times the exposure limit (OEL) of the contaminant particles, against a low concentration of non-toxic gases and vapors below the limit value, and against ozone up to 10 x OEL.

#### Warning/Caution

- The user must be trained in the correct way of using the product.
- Use only in well-ventilated areas.
- Respirators should not be used by persons whose face contours, deep scars or other facial deformations prevent adequate sealing which must be formed between the respirator and the face.
- It is necessary to discard the respirator and replace it if it becomes damaged or if breathing becomes troublesome.
- The respirator should not be cleaned; it is intended only for disposable use.
- The effectiveness of the respirator depends on aerosol concentration and the intensity of the user's physical activity.
- The respirator must be disposed off after a single use.
- The respirator does not protect the user against gases, vapours, or in an environment where the oxygen concentration is less than 17% of the volume.
- Make sure that the respirator is not damaged before use.



Straps

- Natural rubber





#### **Product details**

The respirator provides protection from dust and liquid aerosols.

#### Materials

The following materials are used in the manufacture of the respirator: Straps - Natural rubber (caoutchouc) Nose clip - Polypropylene / Iron wires Filtering and Covering Media - Polypropylene

#### Standards

The respirator has been tested to European standards EN 149: 2001 + A1: 2009 and has met the requirements of the FFP3 category. The respirator may be used in an atmosphere containing up to 50 times the exposure limit (OEL) of the contaminant particles.

#### Warning/Caution

- The user must be trained in the correct way of using the product.
- Use only in well-ventilated areas.
- Respirators should not be used by persons whose face contours, deep scars or other facial deformations prevent adequate sealing which must be formed between the respirator and the face.
- It is necessary to discard the respirator and replace it if it becomes damaged or if breathing becomes troublesome.
- The respirator should not be cleaned; it is intended only for disposable use.
- The effectiveness of the respirator depends on aerosol concentration and the intensity of the user's physical activity.
- The respirator must be disposed off after a single use.
- The respirator does not protect the user against gases, vapours, or in an environment where the oxygen concentration is less than 17% of the volume.
- Make sure that the respirator is not damaged before use.

Straps - Natural rubber

NANOLOGIX





### Surgical caps and masks







## Instructions for use

Open the respirator along the nose clip. 2

Gently bend the nose clip as shown.



Place the respirator under your chin with nose clip upwards and pull the straps above your head.

Adapt the nose clip to the shape of the nose by pressing your fingers.

Check the respirator - breathe thoroughly. You should detect the penetration of the air and improve respirator tightness:

1.) Modify the position of the breathing unit

2.) Adujst the head

3.) Modify the position of the straps.

