

TECHNICAL INSTRUCTION RESPIRATORY PROTECTION – USE OF MASK

SHORT VERSION 01.01

APRIL 2020

1. PURPOSE

The purpose of this guide is to help you choose the right medium to protect you from breathing floating particles.

2. GENERAL

The use of the mask is important and recommended because:

- ✓ It protects the person from accidentally touching his/her mouth and nose with his/her hands which may be infected.
- ✓ It protects the person from inhaling infected droplets from colleagues who may be carriers of the virus.
- ✓ It protects other people from the spread of the virus, in case the person himself is a carrier but does not know it .

3. TYPE OF MASKS

There are different types of masks on the market

- ✓ SURGICAL MASK
- ✓ DISPOSABLE PROTECTION RESPIRATOR MASK
- ✓ NON-SURGICAL CLOTH FACE MASK



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❖ SURGICAL MASK

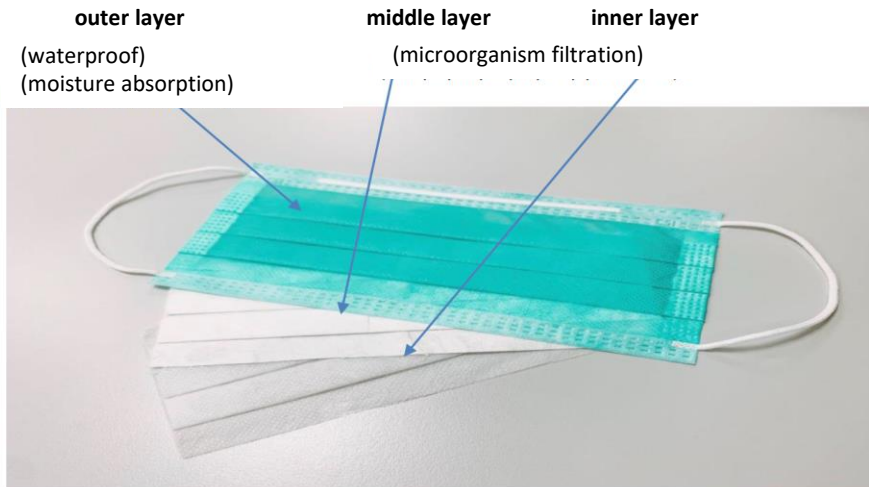


BASIC FUNCTION

Helps protect patients or the environment from the germs that the person who wears it exhales.

TECHNICAL STANDARDS

- ✓ Protection factor 1
- ✓ It is tested according to EN 14683:2005
- ✓ Approved from the European Standard for medical equipment (93/42/EEC)
- ✓ Not approved under the European Standard for PPE (Personal Protective Equipment) (89/686/EEC)



❖ DISPOSABLE PROTECTION RESPIRATOR MASK



BASIC FUNCTION

Helps the person who wears it to be protected from airborne particles.

ADDITIONAL FUNCTION

- ✓ Provides additional protection for the environment from outgoing user particles
- ✓ It works as a filter for incoming and outgoing air
- ✓ It is designed for tight and comfortable fit around the airway without air leaks
- ✓ Provides proven protection of the respiratory system

TECHNICAL STANDARDS

- ✓ Protection factor 4-50
- ✓ It is tested according to EN 149:2001 +A1:2009 and to EN14683:2005
- ✓ Approved under the European Standard for PPE (89/686/EEC) and for medical equipment (93/42/EEC)

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❖ DISPOSABLE PROTECTION RESPIRATOR MASK

One-Use Respiratory Masks must meet the requirements of the European Standard **EN 149: 2001 + A1: 2009** for filter protection respirators, for protection only from solid particles and non-volatile liquid particles.

The products are classified based on the efficiency of the filter, the maximum total inward leakage efficiency (FFP1, FFP2 and FFP3), as well as the usability and durability of the barrier:

1. **FFP1** (protects against low dust levels, solid and liquid aerosols)
2. **FFP2** (protects against moderate dust levels, solid and liquid aerosols. Higher level of protection than FFP1)
3. **FFP3** (protect against higher dust levels, solid and liquid aerosols. Higher level of protection than FFP1 & FFP2)

Indicatively, the security levels per mask type are:

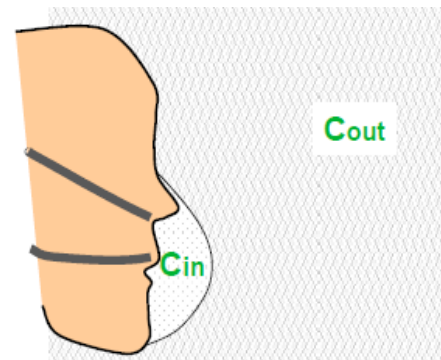
EN 149:2009+A1 – Particle Masks

% Pollution Retention*		Leakage	Protection Factor
FFP1	78%	22%	4 x EOE
FFP2	92%	8%	12 x EOE
FFP3	98%	2%	50 x EOE

*Particles, water soluble and oil soluble droplets according to EN 149:2009

Protection Factor

The protection factor is the ratio between the concentration of pollutants in the air to the concentration of pollutants inhaled by the user of the mask.



$$\frac{C_{out}}{C_{in}} = \text{Protection Factor}$$

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❖ MASK LIFE TIME

The "life" time of each mask depends on the hours of use, the way it is used and the person who uses it.

Manufacturers provide instructions for proper use / maintenance and on time replacement, in the packaging of each product. For this reason, their instructions must be taken into account.

The masks should be discarded and replaced when they are moistened internally at a point that makes it difficult to breathe (that is when it clogs and makes it difficult for the user to breathe comfortably)

❖ WEARING INSTRUCTIONS FOR SURGICAL MASK

There is ONE way to properly wear a simple surgical mask. The simple surgical mask is a natural barrier to fluids and large droplets of respiration. Properly used, it protects against the transmission of respiratory diseases transmitted by droplets.

- ✓ Choosing the right size
- ✓ Hand hygiene before wearing the mask
- ✓ Apply the mask on the face so that it completely covers the nose, mouth and chin (firmly, without gaps)
- ✓ Press the metal part on the nose

- ✓ Secure using the laces in the middle of the back of the head and neck. For a mask with elastic loops, they are applied around the ears.
- ✓ Avoid touching the mask after placement, otherwise apply hand hygiene before and after contact
- ✓ To remove the mask untie the laces first from below and then from above. If it is a mask with elastic loops, remove by taking off the loops at the same time. Be careful!
- ✓ Disposal in the special bin for contaminants
- ✓ Apply hand hygiene



The outer layer of the mask is colored and repels liquids so that in the event of blood or other biological fluids touching the mask, they do not enter the upper respiratory system. If this side is placed inwards, the vapor produced by the exhalation remains on it and creates a feeling of suffocation. The inner layer is white and aims to absorb the vapor of exhalation. The filtration of microorganisms is done from the middle layer which is not visible.

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WEARING INSTRUCTIONS FOR DISPOSABLE RESPIRATOR MASK

After applying hands hygiene:

❖ **WEAR the high protection respirator mask**
(FFP2 or FFP3) depending on the type of activity.

❖ **APPLY the mask properly:**

1. COVER the whole chin and press the lamina on and around the nose
 2. The elastic straps are placed around the neck and the middle of the back of the head respectively (FIGURE 1-5)
- ❖ **FITTING:** Inhale to make an alcove in the mask. Exhale to see if there is a leak from the sides and top of the mask (FIGURE 6)



Safety



Use of mask

- ☐ **Mandatory use of mask** from employees and customers in barber shops, hairdressers, beauty salons and other services which require physical contact
- ☐ **Strict recommendation for mask use** (cloth mask ok other) in all closed spaces by employees and customers and inside public transportation
- ☐ **Elderly people** (strong recommendation to continue “stay home”)

**The obligation to use a mask as a means of protection is formed in accordance with the instructions of the official government agency*

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❖ NON-SURGICAL CLOTH FACE MASK (COMMUNITY MASK)



Non-surgical masks are usually made of fabric and are not intended for use in health structures or by health professionals.

It is used by the general population to cover the face (nose and mouth) of the person wearing it.

It is available on the market, but it can also be made at home from a variety of materials (usually cotton fabric).

❖ FABRIC FOR NON-SURGICAL MASK



Cotton fabric with a dense weave (e.g. cotton T-shirt, cotton sheets, or cotton kitchen / food towels) can be used. 100% cotton fabrics with dense weave in a double layer offer very high protection.

Alternatively, they can be used, with a lower protection percentage:

- ✓ 2 layers of cotton fabric of loosen weave
- ✓ 2 layers of linen fabric
- ✓ 2 layers of silk fabric

1 Lay an old t-shirt out on a flat surface. Using a ruler or cloth tape measure, start at the bottom of the shirt and measure up 7-8 inches

2 Cut up an across. You'll end up with a big rectangle. This will be the material for your mask. Place the remaining material from the t-shirt to the side.

3 Place the rectangular piece of fabric on a flat surface and fold the material from the bottom to the middle. Then fold from the top to the middle.

4 Fold it again from the bottom to the middle and the top to the middle. This will be your mask.

5 Loop a rubber band or large hair tie around each end of the fabric, about 2 inches from the end of the fabric.

6 Fold the right side in towards the center, then the left side in towards the center. The two should meet.

7 Grab the mask by the rubber bands or hair ties and place over your mouth, securing each side by wrapping the band or hair tie around your ear. This should be tight enough to keep the mask in place.

BioSAfETY

ATTENTION

“The use of a cloth mask is prohibited for children under 2 years old, for people with difficulty breathing, for unconscious people, or for people who, due to incapacity, cannot remove it without help.”