

The safety awareness materials for public and contractors on risk of asbestos in the debris and the damaged buildings

PERSONAL PROTECTIVE EQUIPMENT FOR WORK WITH ACMs

Mandatory use of personal protective equipment (PPE) working with asbestos-containing materials and waste:

- respiratory protective equipment;
- protective clothing and footwear;
- eye protection (safety goggles);
- hand protection (gloves).

Training in the proper use and testing of personal protective equipment must be completed before starting work.



RULES FOR THE CHOOSING AND USING OF PERSONAL RESPIRATORY PROTECTIVE EQUIPMENT (RPE)

“Medical masks are not respirators!”

How to choose a high-quality and effective respirator:

- included soft metal nose clip (nasal plate);
- tight fixation on the face during physical activity and active movements;
- the presence of a valve that provides normal breathing;
- ease of maintenance and operation.
- FFP3 respirators are highly efficient, clean up to 99% of impurities, allow working at concentrations that exceed the MAC by 50 times and protect the respiratory system from the harmful aerosols.
- FFP3 respirators are used when working with toxic dust, asbestos, radioactive dust and for protection against bacteria and viruses.
- also recommended half facepiece respirator (in accordance with the EN 140 standard) with a P3 filter; and
- a semi-disposable respirator (according to EN 405) with a P3 filter.



A respirator will not protect someone who does not know how to use it correctly!

How to use a respirator correctly:

- The respirator must be sealed to the skin of the face.
- Respirators do not provide adequate protection for unshaven people!
- The presence of a beard or moustache – the use of a respirator does not make sense.
- The respirator must be donned with clean hands in a clean room.
- Do not touch the respirator with your hands when it is on your face.
- Wetting the mask is the first step to replacing it.
- "Disposable respirator" label - indicates a ban on reuse
- The maximum service life of the respirator is no more than 8 hours of continuous operation or one work shift.



How to properly wear a respirator:

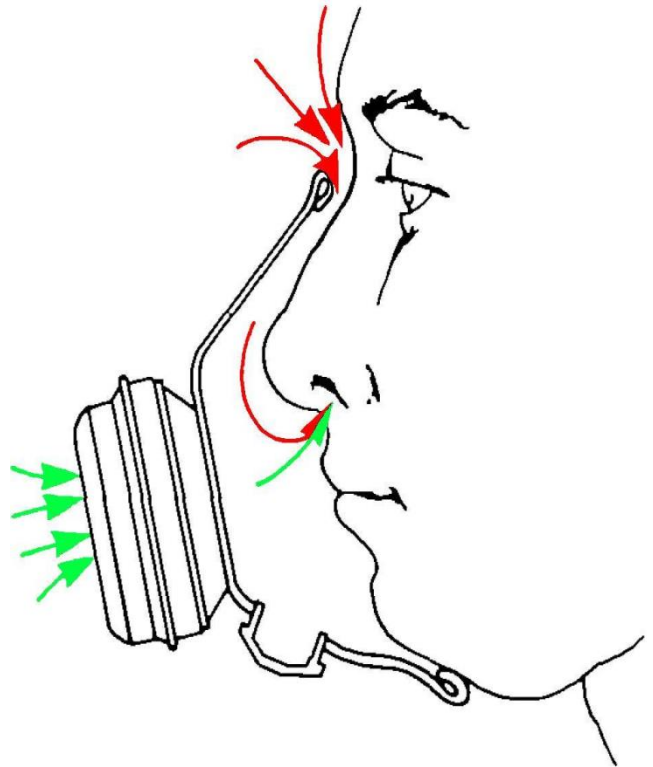
- collect long hair in a ponytail, and shave for men;
- in case of wearing glasses, they should be removed before putting on the respirator;
- wash hands with soap;
- put the elastic bands on the front of the respirator and slide the palm under them;
- attach the respirator to the face, tip the upper elastic band over the back of the head, the lower one behind the ears;
- straighten the respirator on the face, compress the nasal plate with the fingers of both hands;
- check that the respirator bands are not crossed



How to check if a respirator is being put on correctly:

After each putting on a respirator, you have to do a "Palm test":

1. Press the mask to your face with your hands
2. If the respirator without an exhalation valve – **exhale sharply** into the submask space. This inflates the mask slightly. If you feel that the air passes between the respirator and the skin, you need to adjust the fit of the product using the clamps.
3. If the respirator has an exhalation valve – **inhale sharply**. The mask should be pressed against the face. If air leakage is detected, tighten the fixation clamps more tightly.
4. After that, it is necessary to check the fit of the mask to the face again.



RULES FOR THE CHOOSING AND USING OF PROTECTIVE CLOTHING AND FOOTWEAR

Places/objects/areas where levels of asbestos concentration in the air necessitate the use of RPE – also require workers to obtain and wear special protective clothing and footwear.

Protective clothing must be adequate, appropriate in the circumstances and meet the basic requirements:

- be user-sized;
- be comfortable and, if appropriate, allow for physical effort;
- be appropriate for the ambient temperature;
- prevent ingress of asbestos fibers;
- have elastic details on the cuffs, ankles and on the hood of the jumpsuit, providing a snug fit on the wrists, bones, face, and neck;
- not have pockets or other parts in which asbestos dust can accumulate;
- easy to decontaminate or dispose.

How to choose a high-quality and effective protective clothing and footwear:

- Protective special clothing should completely cover all work clothes so that after removing the protective special clothes, asbestos dust does not remain on the work clothes of workers;
- If possible protective clothing should be disposable and made of dust-proof material;
- Do not create a greenhouse effect;
- To have an increased volume of the chest;
- Have high tear strength in wet and dry condition;
- Resistant to multiple deformations;
- Disposable jumpsuits Type 5 must be used (EN ISO 13982-1:2009);
- Protective footwear must be easy-to-wash and without laces;



How to use protective clothing and footwear correctly:

- Before use, check footwear and protective overalls for damage, such as torn seams, improper closure of zippers, or other visible defects that may impair protection.
- If the protective clothing does not have cuffs, the ends of the sleeves must be taped to the arm. The ends of the trousers must be pulled over the boots and preferably covered with duct tape.
- The hood must be put on the head in such a way that the straps of the respiratory protection equipment remain under the hood.
- Daily dedust protective clothing after the shift using devices equipped with dust collectors.
- Special protective clothing must not be worn outside the workplace or locker room for contaminated clothing.
- Disposable jumpsuits used in areas with ACM waste should be treated as asbestos waste and properly disposed after each shift.
- Disposal jumpsuits after one use cannot be necessary if they are occasionally used and in cases where the risk of contamination is low.

RULES FOR THE CHOOSING AND USING OF EYE PROTECTION

To protect the eyes from possible injury, workers must be provided with personal protective devices, the choice of which depends on the specific conditions of the production process.

The following types of protection are used for construction and dismantling works:

- Classic goggles (open type glasses);
- Closed goggles (sealed glasses);
- Safety mask (shield)

For construction work, goggles must have the following structural elements:

- Shockproof lenses;
- One-piece or combined frames with protective shields on the sides, top and bottom (for classic glasses);
- Flexible rubber or silicone construction for a snug fit to the face (for sealed glasses);
- The presence of ventilation holes located on the sides or around the perimeter of the frame;
- Adjustable braces/straps and flexible nose pads;
- Hydrophobic and antistatic lens coating.



How to choose a high-quality and effective safety goggles:

An important characteristic with proper choosing is: optical class, impact strength, manufacturer, CE mark certification. Depending on the strength of the lenses and frame, **goggles have different markings**, which are applied to the lens and frame, respectively.

Lens labelling should include:

- filter number
- manufacturer's logo or brand name
- optical grade
- symbols of material strength
- application symbols
- symbols of mechanical strength

There are several main characteristics of a lens that determine its protective qualities in accordance with the **European standard (CE) EN166**. One of the main qualities is the resistance of the lens to impact loads from particles and is indicated as speed in meters per second.

How to read the markings on goggle frames:

For example – **3M EN166 XXX FT CE**

The first symbol – 3M (manufacturer);

EN166 - European standard;

XXX - scope of application:

The scope of application is indicated by numbers:

- 3** - protection against liquids (drops and splashes).
- 4** - protection against particles **larger than 5 microns**.
- 5** - protection against microscopic particles **less than 5 microns** in length (aerosols).
- 8** - protection against electric arc short circuit.
- 9** - protection against splashes of molten metal and hot particles

FT - mechanical strength:

Mechanical strength is indicated by the letters **S, F, B, A**:

- A** - protection against low-energy shocks up to 190 m/s
- B** - protection against low-energy shocks up to 120 m/s.
- F** - protection against low-energy shocks up to 45 m/s.
- S** - protection against low-energy impacts up to 12 m/s
- T** - protection at **extreme temperatures from -5 to + 55 °C**.

Optical grade is the level of distortion that glasses create. With optical parameters, all goggle are divided into three grades:

- 1** - for permanent work
- 2** - for work with breaks
- 3** - not for permanent wear

How to read the markings on goggle lenses:

For example – **2C-2.5/5-2.5 U 1 FT KN CE**

Filter ID:

- 2** - protection from ultraviolet radiation (UV);
- 2C or 3** - protection against ultraviolet radiation (UV) with good colour reproduction;
- 4** - protection from infrared radiation (IR);
- 5** - protection against solar radiation (SUN) without infrared specification (IR).
- 6** - protection against a combination of solar radiation (SUN) with an infrared specification (IR).

Dimming degree:

- 1.2** - transparent
- 1.7** - for work indoors and outdoors.
- 2.5** - brown or smoky

Optical grade:

- 1 - for permanent work
- 2 - for work with breaks
- 3 - not for permanent wear

Mechanical strength:

- A - protection against low-energy shocks up to 190 m /s
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You should also pay attention to **related protection**:

- A/S - scratch resistant coating
- A/F - anti-fog coating
- KN - anti-fog and scratch-resistant coating.

RULES FOR THE CHOOSING AND USING OF HAND PROTECTION

According to the Technical Regulations for Personal Protective Equipment, all personal protective equipment is divided into 3 categories depending on the degree of risk:

- Minimum level of risk for the user
- Average level of risk for the user
- Equipment for protection against risk with irreversible consequences.

To work with ACMs, it is enough to use gloves of the first and second categories in the work - **Gloves for protection against minimal and medium risk levels.**

General requirements for protective gloves are set out in the State Standard of Ukraine EN 420-2001:

- pH neutrality (from 3.5 to 9);
- Safety: glove design, materials used, degradation due to normal use of gloves must not endanger the health and hygiene of the wearer;
- The size;
- Sufficient mobility of protected hands;

Special requirements for leather gloves:

- The content of chromium VI should be no more than 2 mg/kg
- Water ingress.

If **latex gloves** are to be used, they must be free of low protein powder.



Classification of protective qualities of gloves:

The level of protection of gloves is indicated next to the pictogram of the SSU EN 388:2005 standard. 0 is the lowest protection level.

Gloves for protection against mechanical damage:

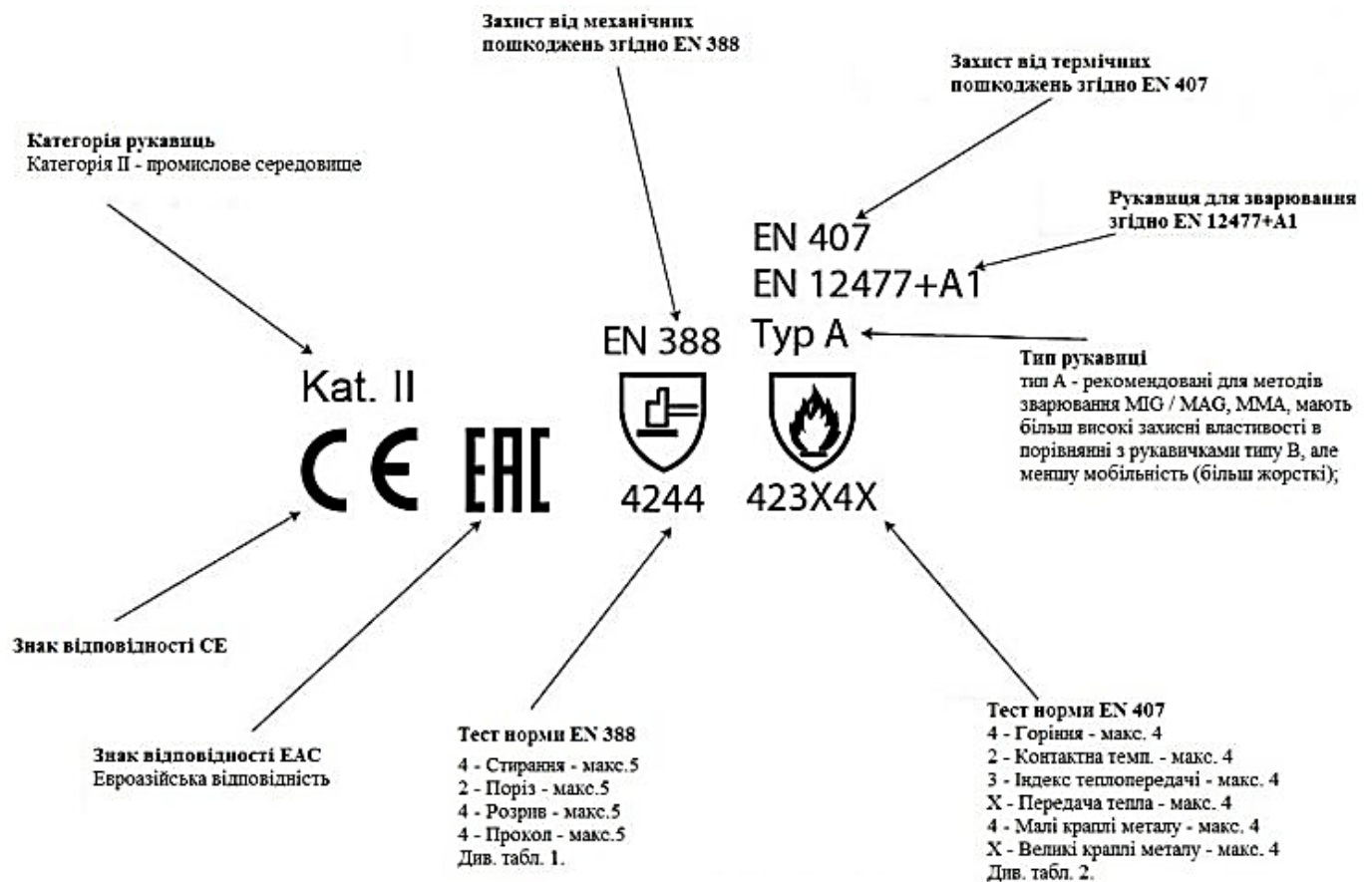
1st digit: 0 - 4 Abrasion resistance (number of cycles needed to damage the mitt).

2nd digit: 0 - 5 Knife cut resistance (number of cycles needed to cut through the mitten).

3rd digit: 0 - 4 Tear resistance (maximum force required to break a mitten).

4th digit: 0 - 4 Puncture resistance (the force required to pierce a glove with a standard hole punch)

Safety gloves marking



Used gloves should be disposed of as asbestos waste.