

400 series filters

Protection against gases, vapours and dusts, fumes and mists

DATA SHEET

424 ABEK1P3 R EN 14387:2004

Code 8011022



Characteristics

424 ABEK1P3 R filter is a combined filter and it consists of a gas filter combined with a particle filter, so it protects against both gas (gases, vapours) and particle (dusts, fumes, mists) pollutants. 424 ABEK1P3 R filter is equipped with a standard threaded connection conforming to EN 148-1 standard and it's possible to use it on half mask and full face mask equipped with the same standard connection.

Application

424 ABEK1P3 R filter protects against organic compounds with a boiling point above 65°C, inorganic and acid gases and vapours as well as ammonia and organic ammonia derivatives and solid and liquid hazardous particles, and it can be used in the presence of substances as solvents, hydrochloric acid, chlorine, ammonia, sulphur dioxide, etc. It is classified in terms of capacity as a class 1 gas filter (low capacity filter) and in terms of filtering efficiency as class P3 particle filter (high efficiency filter).

Protection

Exposure limit for 424 ABEK1P3 R filter:
with half mask: for gas and vapours 30* x TLV or 5000 ppm considering as limit the lower value; for particles 30* x TLV.
with full face mask: for gas and vapours 400* x TLV or 5000 ppm considering as limit the lower value; for particles 400* x TLV.
* = APF as shown in EN 529:2005 standard (value for Italy)

Materials

424 ABEK1P3 R is made of:
· filter case: ABS
· gas filtering component: activated carbon ABEK type
· particle filtering component: pleated part in glass fibre
Height (thread excluded): 82 mm
Diameter: 100 mm
Weight: 285±7 g

Test according to EN 14387:2004	ABEK1P3	424 ABEK2P3 R
Minimum breakthrough time (min)		
Cyclohexane C ₆ H ₁₂	>70	80
Chlorine Cl ₂	>20	38
Hydrogen Sulphide H ₂ S	>40	83
Hydrogen Cyanide HCN	>25	45
Sulphur Dioxide SO ₂	>20	23
Ammonia NH ₃	>50	55
Filter penetration (Paraffin oil) %		
after 3 min	< 0,05	0,0005
after 63 min	< 0,05	0,001
after storage	< 0,05	0,001
Breathing Resistance (mbar)		
inhal. 30 l/min	< 2,2	1,8
inhal. 95 l/min	< 8,2	7,8



Certification

424 ABEK1P3 R filter meets the requirements of EN 14387:2004 standard and is CE marked, as provided by the 89/686/EEC European Directive, as a PPE of III category. CNMP (Notified Body n°0159) is the responsible of the certification (Art. 10) and of the final product control (Art.11.A). All the products are manufactured in a company that is ISO 9001:2008 certified.

Certification Tests

424 ABEK1P3 R filter meets the requirements of 14387:2004 standard and has been submitted to the tests provided by class 1 for the gas component and by class 3 for the particle component.

· Breathing Resistance

The resistance offered from the filter to the air flow must be lower as possible and, in any case, must not be greater than the following values for combined filters ABEK1 P3 type and class (par. 6.11 of EN 14387:2004 standard): with an air flow of 30 l/min must be lower than 2,2 mbar and with an air flow of 95 l/min must be lower than 8,2 mbar.

· Gas capacity (for gas component)

425 ABEK2P3 R filter has been submitted to tests according to par. 6.12 of EN 14387:2004 standard, to verify the minimum breakthrough time, when exposed to test gases at determinate concentration. For A1B1E1K1 type filters test gases used are the ones provided by the standard and listed in the table below.

· Filter penetration (for particle component)

Filtering efficiency of the material forming the particle component of the filter, is determined using sodium chloride and paraffin oil test aerosols. P3 class provided a minimum filtering efficiency of 99,95 % (filter penetration <0,05%). The filters keep unchanged their filtering efficiency also after the long exposure test (reaching of 120 mg in concentration of test aerosol) and they are certified as reusable for more than one work shift (R marking).

Application, Limitation, Warnings

Warnings

1) This filter does not supply oxygen (O₂). 2) It is designed for use in ventilated work areas where the concentration of oxygen is more than 17% by volume. 3) Choose the appropriate filter for the concentration and type of contaminant. 4) It must not under any circumstances be used for protection against carbon monoxide. 5) The filter must not be modified or altered. 6) The filter does not require any type of maintenance or repairs. 7) Unsealed filters which are not considered saturated must not be used for more than one (1) month. 8) It must be used on masks conforming to the EN 136 and EN 140 standards and with EN 148-1 thread. 9) Leave the work area if the respirator becomes damaged, resulting in difficulty breathing and/or faintness or dizziness. 10) The facepieces or masks with filters cannot be used inside containers, wells, sewers or other closed areas without ventilation. 11) This filter must be used in compliance with the workplace regulations in force, and in particular with the regulations concerning respiratory protection, working with hazardous substances and protection against radiation.

Before each use

1) Carefully read the instructions for use before opening the filter seal. 2) Check that the filter is of the correct type for the intended use. 3) Check that the facepiece complies with the requirements of EN 136, EN 140 and EN 148-1.

4) Inspect both the filter and facepiece for any breaks, damage, signs of impact and/or soiling. In this case they must be discarded. 5) Check that the cover and cap are in the original position, and that the filter is not without its cap. 6) The filter must be examined before each use. If there are any signs of damage, it must be replaced.

Instructions for assembling the filter

1) Unseal the filter. 2) Remove the protective cover. 3) Remove the protective cap. 4) Ensure that the sealing connector of the facepiece is correctly positioned on the base of the filter-holder. If the connector is distorted or unseated from the base, the filter may be subject to leakage. Replace or adjust the connector if necessary. 5) Insert the filter in the filter-holder on the facepiece and fully lock down the filter. 6) Check the tightness of the facepiece against the user's face.

Cleaning, sanitizing and maintenance

1) The filter does not need to be cleaned. 2) The filter must be used by only one person, and therefore does not need to be sanitized. 3) The filter does not require maintenance or repairs. 4) When the filter becomes saturated (it is considered saturated when the user can smell the gases or vapours being filtered) or when the recommended service life has expired, the filter must not be used.

Storage time: 5 years (factory sealed); the storage limit is marked on filter label and box.

Storage conditions: temperature -10°C ... +50°C, RH < 70%.

For further information's see the User's instruction leaflet accompanying each filter (code ISU009_01).



Technical Details

In order to ensure high hygiene and increase the lifespan of the filter, the filtering paper is folded without the use of any glues.

Each filter is tested:
 filtering efficiency test for dust protection
 breathing resistance and weight for the carbon protection

