

## DATA SHEET

### 411 A2 EN 14387:2004 Code 8011002



| Test according to EN 14387:2004            | A2              | 411 A2 |
|--|-----------------|--------|
| Minimum breakthrough time (min)            |                 |        |
| Cyclohexane C <sub>6</sub> H <sub>12</sub> | > 35            | 55     |
| Breathing Resistance (mbar)                | inhal. 30 l/min | < 1,4  |
|  | exhal. 95 l/min | < 5,6  |
|  |                 | 0,8    |
|  |                 | 3,1    |



### Characteristics

411 A2 is a gas filter containing granular activated carbon, that chemically and/or physically stops polluting gases and vapours. 411 A2 filter is equipped with a standard threaded connection conforming to EN 148-1 standard and it is possible to use it on half mask and full face mask equipped with the same standard connection. 411 A2 filter, thanks to its reduced dimensions and weight compared with other filters, is more comfortable and doesn't interfere the field of vision.

### Application

411 A2 filter protects against gases and vapours from organic compounds (e.g. solvents) with a boiling point above 65°C. It can be used in presence of substances as solvents for conventional paints (MEK, Toluene, ecc). It is classified in terms of capacity as a class 2 gas filter.

### Protection

Exposure limit for 411 A2 filter:  
with half mask: 30\* x TLV or 5000 ppm considering as limit the lower value;  
with full face mask: 400\* x TLV or 5000 ppm considering as limit the lower value.  
\* APF as defined in EN 529:2005 standard (value for Italy).

### Materials

411 A2 filter is made of:  
· filter case: ABS  
· gas filtering component: activated charcoal A type  
Height (thread excluded): 35mm  
Diameter: 100 mm  
Weight: 175 ± 5 g

### Certification

411 A2 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

411 A2 filter meets the requirements of 14387:2004 standard and has been submitted to the tests provided by class 2 for A type filters.

#### • 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 class 2 gas filters par. 6.11 of EN 14387:2004 standard): with an air flow of 30 l/min must be lower than 1,4 mbar and with an air flow of 95 l/min must be lower than 5,6 mbar.

#### • Gas capacity

411 A2 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 gas at determinate concentration. For A2 filter the test gases are the ones listed in the table below, with the respectively breakthrough times.

#### • Temperature conditioning

Filter, contained in its factory sealed packing, has been submitted to the following thermal cycle:  
a) for 24 h to a dry atmosphere of (70 ± 3) °C;  
b) for 24 h to a temperature of (-30 ± 3) °C;  
and allow to return to room temperature for at least 4 h between exposures and prior to subsequent testing.

## Application, Limitation, Warnings

## Warnings

1) This filter does not supply oxygen (O<sub>2</sub>). 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 all the informations about applications, limitations of use and maintenance, see the User's manual enclosed to each filter (code ISU009\_01)



## Technical Details

Each filter is tested:  
breathing resistance and  
weight for the carbon protection

