

## Datasheet Breathing filter 81 ABEKSt/Ü

**Designation:** Respiratory protection screw filter ABE2K1-P3 R D  
Special filter to DIN EN 14387 Filter type/class A2 B2 E2  
K1- P3 R D Combination filter as part of a respiratory  
protective device to DIN EN 133 - Filter device

**Description:** Cylindrical housing with threaded connection M 45 x 3  
according to DIN EN 148-3

**Article-Number:** 924451

**Application:** In conjunction with breathing connection - full face masks (DIN EN 136) with  
threaded connection M 45 x 3 - for protection against organic gases and  
vapors with boiling point above 65°C, against inorganic gases and vapors  
e.g. chlorine, hydrogen sulfide (hydrogen sulfide), hydrogencyanide  
(hydrogen cyanide, hydrogen cyanide) - not against carbon monoxide –  
against sulfur dioxide, hydrogen chloride (hydrogen chloride), against  
ammonia, against mercury vapor and against particles  
R = Reusable - reusable against particles  
D = particularly resistant to clogging by dust  
(storage test with dolomite dust in accordance with EN 143)

**Standards:** DIN EN 133 Respiratory protective devices - Classification  
DIN EN 148-1 Respiratory protective devices - Threads for  
breathing connections - Round thread  
connection  
DIN EN 14387 Respiratory protective devices - Gas filters  
and combination filters

**Identification colors:** brown - grey - yellow - green - white (adhesive label)

**Materials:** Housing, perforated disks Aluminum alloy  
Filter medium Activated carbon and glass/cellulose fiber  
Non-woven discs Polypropylene  
Sealing foil Polypropylene

**Dimensions:** Diameter approx. 108 mm  
Height approx. 90 mm

**Weight:** approx. 356 grams

**Inhalation resistance:** < 2.6 mbar at 30 l/min constant air flow  
< 9.8 mbar at 95 l/min constant airflow

**Filter flow rate:** Sodium chloride test at 95 l/min: < 0.05 %  
Kerosene oil test at 95 l/min: < 0.05 %

**Storability:** 6 years - from date of manufacture (protected from cold, heat and moisture)

**Handling:** Only open the filter immediately before use  
and screw firmly into the connector of the mask.

Revision 11.2023 – Errors and omissions excepted. All data are non-binding guide values.

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|                       |  |  |  |
|-----------------------|--|--|--|
| Main application:     | Organic gases and vapors (boiling point > 65°C) and inorganic gases and vapors, such as chlorine, hydrogen sulphide (hydrogen sulphide) and hydrogencyanide<br>Hydrogencyanide (hydrogen cyanide, hydrogen cyanide) and against sulphur dioxide, hydrogen chloride (hydrogen chloride), ammonia and particles.<br>Caution: Not against carbon monoxide.  |  |  |
| Service life:         | The service life of combination filters depends on several factors such as concentration of the harmful gases, ambient temperature, humidity, work intensity, posture, etc. and therefore cannot be determined in advance.<br>Opened filters must be replaced after 6 months at the latest.  |  |  |
| Application limits:   | according to technical rules for hazardous substances TRGS 900 "Occupational exposure limits"  |  |  |
|                       | with full face mask (particle filter):   | 400 times the occupational exposure limit value      |  |
|                       | with full face mask (gas filter):  | 400 times the occupational exposure limit value      |  |
|                       | Maximum permissible Gas concentration:   | of gas filter class 1 (A1, B1, E1, K1) = 1,000 ml/m³ |  |
|                       | Maximum permissible gas concentration:   | of gas filter class 2 (A2, B2, E2, K2) = 5,000 ml/m³ |  |
| Instructions for use: | The use of breathing filters requires a basic knowledge of the function and handling of respiratory protective devices. Information on this can be found in the trade association regulations and rules, in particular in DGUV Rule 112-190.<br>The use of breathing apparatus generally means additional stress for the person wearing the breathing apparatus.<br>Most respiratory protective devices require occupational health screening in accordance with the "Ordinance on Occupational Health Care" (ArbMedVV).<br><b>Damaged filters must not be used.</b> |  |  |

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In ATEX areas, these respiratory protection filters can be used in potentially explosive atmospheres in zones 1, 21, 2 and 22 if the following requirements are observed:

- The respiratory protection filters must be earthed via a dissipative mask and via the earthing of the wearer with a leakage resistance  $<108 \Omega$ .
- The respiratory protection filters must not be used in areas where highly charge-generating processes are to be expected.
- In the presence of an explosive atmosphere, the respiratory protection filters may only be worn on the face mask and not on the belt.
- The permissible ambient temperature must not exceed a value of 70 °C, assuming a temperature increase of 10 K at the parts in contact with an explosive atmosphere during normal operation and also in the event of a fault (zone 1 or 21) or during normal operation (zone 2 or 22) due to the activated carbon filter

### Rules / regulations:

Regulation (EU) 2016/425 on personal protective equipment  
PPE Usage Ordinance (PSA-BV)  
Ordinance on Occupational Health Care (ArbMedVV)  
BGV A1 Employer's Liability Insurance Association Regulation for Safety and Health at Work - Accident Prevention Regulation - Principles of Prevention

DGUV Rule 112-190 Employer's liability insurance association rules for safety and health at work - "Use of respiratory protective devices"

Hazardous Substances Ordinance (GefStoffV) with associated Technical Rules for Hazardous Substances (TRGS), in particular TRGS 402  
"Determination and assessment of hazards during activities involving hazardous substances: Inhalative exposure" and other technical rules for hazardous substances.

### Order details:

| Article number | Description  |
|----------------|--|
| 924451         | Overpressure combination filter 81 ABEKSt with M45x3         |
| 111204         | Full face mask BRK 820 A                                     |
| 111704         | Wall container for full face mask including one filter       |
| 111705         | Wall container for two full face masks including two filters |
| 111703         | Carrying box B78 for one full face mask and one filter       |

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