

# Technical Data Sheet

## Filter A2B2E2K2-P3 R D/NBC Black



|                         |                    |   |
|-------------------------|--------------------|---|
| <b>1.0 General Data</b> |                    |   |
| 1.1                     | Manufacturer       | Dräger Safety AG & Co. KGaA<br>Revalstraße 1, D - 23560 Luebeck, Germany  |
| 1.2                     | Designation        | Filter 1140+ A2B2E2K2-P3 R D/NBC black shrink-wrapped   |
| 1.3                     | Dräger part no.    | 67 39 780   |
| 1.4                     | Intended use       | Respiratory protection against gases, vapours and particles in conjunction with a specified face piece. Scope of protection as indicated by product documentation, technical standards and installed application rules. |
| 1.5                     | Relevant standards | EN 14387:2008, TL 4240-0065 (August 2006)   |
| 1.6                     | Certification      | EU type approval test certificate, granted by accredited and notified test institute DEKRA EXAM GmbH, Dinnendahlstraße 9, 44809 Bochum, Germany / Additional tested according to TL 4240-0065                           |

|                                      |                         |  |
|--------------------------------------|-------------------------|--|
| <b>2.0 Design &amp; Construction</b> |                         |  |
| 2.1                                  | Connection to facepiece | Standard thread connection RA (Rd 40 x 1/7") as per EN 148 part 1  |
| 2.2                                  | Materials               | Filter housing: aluminium, coated inside<br>Lacquering: black<br>Sorbents: activated and impregnated carbon<br>Particle filter: micro-glass fibres, cellulose-fibres, additives<br>Plugs: aluminium / polyethylene<br>Label and seals: paper   |
| 2.3                                  | Design                  | The filter housing has a round shape and consists of the filter pot and the filter cover. Filter pot includes the RA thread, filter cover has a round opening to the inhalation side. There is one filter bed consisting of activated carbon. It is fixed by the housing and internal sieves. The particle filter is positioned in front of the gas filtration part on the inhalation side. It is made of one part and has parallel folds. A leaktight connection between the particle filter and the housing is performed by butyl glue. The filters are water-vapour-tight closed by an aluminium cap on the outlet and a plastic cap on the intake. |
| 2.4                                  | Working principle       | Gases and vapours are removed from the ambient air by adsorption onto the sorbent (activated and impregnated carbon), particles are filtered by the micro-glass fibre filter.  |
| 2.5                                  | Shelf life              | 12 years (10+2)  |
| 2.6                                  | Dimensions              | Outer diameter: 110 mm<br>Height (incl. thread and plugs): 106 mm<br>Volume activated carbon: 370 mL<br>Volume of the filter: (excl. thread): 780 mL   |
| 2.7                                  | Weight                  | excl. plugs, excl. package: ≤ 400 g  |

|  |                                |   |
|--|--------------------------------|---|
| <b>3.0 Performance Data</b> (minimum data in accordance with standard) |                                |   |
| 3.1  | Particle filtration efficiency | Test aerosols: sodium chloride, paraffin oil<br>Minimum efficiency 99,95% NaCl, 99,997% paraffin oil<br>(EN 143:2000 re. TL4240-0017) |

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3.2 Gas filtration capacity Test conditions (EN 14387:2008): 30 L/min, 70% rel. humidity, 20°C

### Test results according to TL 4240-0065: August 2006:

| Gas                              | Concentration        | Breakthrough                      | Duration  |
|----------------------------------|----------------------|-----------------------------------|-----------|
| Cl <sub>3</sub> CNO <sub>2</sub> | 5 g / m <sup>3</sup> | 3,5 mg/m <sup>3</sup> od. 0,5 ppm | > 40 min  |
| Hydrogen Cyanide (HCN)           | 2 g / m <sup>3</sup> | 11 mg/m <sup>3</sup> od. 10 ppm   | > 75 min  |
| ClCN                             | 2 g / m <sup>3</sup> | 2,5 mg/m <sup>3</sup> od. 1 ppm   | > 120 min |

### Test results according to EN 14387:2008

| Gas                            | Concentration | Breakthrough          | Duration |
|--------------------------------|---------------|-----------------------|----------|
| C <sub>6</sub> H <sub>12</sub> | 5000 ppm      | 10ml/m <sup>3</sup>   | > 35 min |
| Cl <sub>2</sub>                | 5000 ppm      | 0,5 ml/m <sup>3</sup> | > 20 min |
| H <sub>2</sub> S               | 5000 ppm      | 10 ml/m <sup>3</sup>  | > 40 min |
| HCN                            | 5000 ppm      | 10 ml/m <sup>3</sup>  | > 25 min |
| SO <sub>2</sub>                | 5000 ppm      | 5 ml/m <sup>3</sup>   | > 20 min |
| NH <sub>3</sub>                | 5000 ppm      | 25 ml/m <sup>3</sup>  | > 40 min |

- 3.3 Breathing resistance at 30 liters/min (normliters), constant flow < 2,5 mbar  
at 95 liters/min (normliters), constant flow < 8,2 mbar
- 3.4 Mechanical resistance Resistant to shock and vibration as required by EN 14387:2008  
Drop-test (1,2 m concrete) 5 times vertical, 5 times horizontal
- 3.5 Chemical resistance For normal use conditions the filter is resistant against temperature, humidity and corrosives. The filter is internally resistant against the filtering agents (sorbents). Ingress of water or other liquids must be avoided.

## 4.0 Documentation

- 4.1 Markings Label: marking includes colour coding in accordance with EN 14387:2008, batch number, expiry date and indication on the instruction for use (sand clock symbol). Approval marking: **CE 0158**
- 4.2 Instruction for use Each filter is accompanied by an instruction for use in the following languages: English, French, German, Spanish, Portugese, Norwegian, Swedish, Danish, Italian, Dutch, Turkish, Polish, Slovakian, Slovenian, Czech, Hungarian, Romanian, Bulgarian.

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### 5.0 Packing & Packaging

- |     |                |  |
|-----|----------------|--|
| 5.1 | Package        | Carton, robust for normal transportation and storage, closed with factory label, indicating designation, type of filter, batch number, expiry date |
| 5.2 | Packaged units | 1 each   |

### 6.0 User notes and limitations

Dräger Safety AG & Co. KGaA guarantees the performance indicated by the class and type of the filter it is marked with. It must be noted that laboratory values differ from those that can be measured in practise. This may result in longer or shorter break through times. The user must read and understand the instructions for use. Additionally the knowledge of **all** relevant application rules is vital (see in particular the limitations of use). Further information on request.

**Dräger Safety AG & Co. KGaA**