

Technical Data Sheet

Filter A2B2E2K2-P3 R D/NBC Silver



1.0 General Data		
1.1	Manufacturer	Dräger Safety AG & Co. KGaA Revalstraße 1, D - 23560 Luebeck, Germany
1.2	Designation	Filter 1140 A2B2E2K2 P3 R D/NBC silver
1.3	Dräger part no.	67 39 224
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 14387:2004, 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

2.0 Design & Construction		
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 Sorbents: activated and impregnated carbon Particle filter: micro-glass fibres, cellulose-fibres, additives Plugs: polyethylene 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.
2.4	Working principle	Both openings are closed by plugs. 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	6 years (4+2)
2.6	Dimensions	Outer diameter: 109 mm Height (incl. thread and plugs): 101 mm Volume activated carbon: 370 mL Volume of the filter: (excl. thread): 780 mL
2.7	Weight	excl. Plugs, excl. package: ≤ 400 g

3.0 Performance Data (minimum data in accordance with standard)		
3.1	Particle filtration efficiency	Test aerosols: sodium chloride, paraffin oil Minimum efficiency: 99,95% NaCl, 99,997% paraffin oil (EN 143:2000 re. TL4240-0017)
3.2	Gas filtration capacity	Test conditions (EN 14387:2004): 30 L/min, 70% rel. humidity, 20°C

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Test results according to TL 4240-0065: August 2006			
Gas	Concentration	Breakthrough	Duration
Cl ₃ CNO ₂	5 g / m ³	3,5 mg/m ³ od. 1 ppm	> 40 min
Hydrogen Cyanide (HCN)	2 g / m ³	11 mg/m ³ od. 10 ppm	> 75 min
ClCN	2 g / m ³	2,5 mg/m ³ od. 1 ppm	> 120 min

Test results according to EN 14387:2004			
Gas	Concentration	Breakthrough	Duration
C ₆ H ₁₂	5000 ppm	10ml/m ³	> 35 min
Cl ₂	5000 ppm	0,5 ml/m ³	> 20 min
H ₂ S	5000 ppm	10 ml/m ³	> 40 min
HCN	5000 ppm	10 ml/m ³	> 25 min
SO ₂	5000 ppm	5 ml/m ³	> 20 min
NH ₃	5000 ppm	25 ml/m ³	> 40 min

3.3	Breathing resistance	at 30 liters/min (normliters), constant flow at 95 liters/min (normliters), constant flow	< 2,5 mbar < 8,2 mbar
3.4	Mechanical resistance	Resistant to shock and vibration as required by EN 14387:2004 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

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| 4.1 | Markings | Label: marking includes colour coding in accordance with EN 141:2000, 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, Portuguese, Norwegian, Swedish, Danish, Italian, Dutch, Turkish, Polish, Slovakian, Slovenian, Czech, Hungarian, Rumanian, Bulgarian. |

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5.0 Packing & Packaging

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| 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