

Technical Data Sheet



Dräger X-plore® Rd40 Respiratory Filter 1140 A2B2E2K2 Hg NO P3 R D / CO 20 P3 R D

1.0 General Data	
1.1 Manufacturer	Dräger Safety AG & Co. KGaA Revalstraße 1, D – 23 560 Luebeck, Germany
1.2 Designation	1140 A2B2E2K2 Hg NO P3 R D / CO 20 P3 R D
1.3 Dräger part no. EAN Code	67 38 814 4026056004829
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	DIN EN 14387: 2008, DIN 58620:2007-02
1.6 Certification	EC type approval test certificate, granted by accredited and notified test institute IFA, Alte Heerstraße 111, D-53757 Sankt Augustin, Germany

2.0 Design & Construction	
2.1 Connection to facepiece	Standard thread connection Rd40 (Rd 40 mm x 1/7") as per EN 148 part 1
2.2 Materials	Filter housing: aluminium, coated inside Sorbents: activated carbon, hopkalite Particle filter: micro-glass fibres, cellulose-fibres, additives Plugs: screw plug or rubber plug 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 Rd40 thread, filter cover has a round opening to the inhalation side. There are two filter beds, one with carbon and one with hopkalite. They are fixed by the housing and internal sieves. The particle filter is positioned in front of the gas filtration parts. It is made of one part and has round folds. A particle tight connection between the particle filter and the housing is performed by butyl glue. Both openings are leaktight closed by screw or rubber plugs and therefore protected against ingress of water vapour.
2.4 Working principle	Gases and vapours are removed from the ambient air by adsorption onto the sorbent (activated carbon), water vapour in the ambient air is uptaken by the impregnated carbon (drying agent), CO is converted into CO ₂ and heat by the CO-catalytic agent (hopkalite), particles are filtered by the fibre filter.
2.5 Shelf life	6 years (4+2) from date of production
2.6 Dimensions	Outer diameter: 108 mm Height (incl. thread and plugs): 103 mm Volume activated carbon: 260 mL Volume hopkalite: 210 mL
2.7 Weight	Incl. plugs, excl. package: approx. 490 g

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3.0 Performance Data	(minimum data in accordance with standard)		
3.1 Particle filtration efficiency	Test aerosols: Minimum efficiency:	sodium chloride, paraffin oil 99.95% NaCl, 99.95% paraffin oil	
3.2 Gas filtration capacity	Test conditions:	30 L/min flow rate, 70% rel. humidity	

Type	Test gas	Class	Test Gas Concentration	Breakthrough Concentration	Minimum Duration Time
A	Cyclohexane (C ₆ H ₁₂)	2	5,000 ppm / 17.5 mg/l	10 ml/m ³	35 min
B	Chlorine (Cl ₂)	2	5,000 ppm / 15.0 mg/l	0.5 ml/m ³	20 min
	Hydrogen Sulphide (H ₂ S)	2	5,000 ppm / 7.1 mg/l	10 ml/m ³	40 min
	Hydrogen Cyanide (HCN)	2	5,000 ppm / 5.6 mg/l	10 ml/m ³	25 min
E	Sulphur Dioxide (SO ₂)	2	5,000 ppm / 13.3 mg/l	5 ml/m ³	20 min
K	Ammonia (NH ₃)	2	5,000 ppm / 3.5 mg/l	25 ml/m ³	40 min
Hg	Mercury Vapour (Hg)	one class only	13.1 mg/m ³ / 1.6 ml/m ³	0.1 mg/m ³	100 h only max. 50 h use allowed (EN)
CO	Carbon Monoxide (CO)	20	2,500 ppm	200 ppm	max. 20 min
NO	Nitrate Monoxide (NO)	one class only	2,500 ppm / 3.1 mg/l	5 ml/m ³	20 min
	Nitrogen Dioxide (NO ₂)		2,500 ppm / 4.8 mg/l	5 ml/m ³	20 min

Note: 5,000 ppm = 5,000 ml/m³ = 0.5 Vol.-%

3.3 Breathing resistance	at 30 litres/min, constant flow at 95 litres/min, constant flow	max. 2.6 mbar max. 9.8 mbar
3.4 Mechanical resistance	Resistant to shock and vibration as required by EN 14387	
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.	

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4.0 Documentation

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| 4.1 | Markings | Label: marking includes colour coding in accordance with EN 14387, batch number, expiry date, approval number and indication on the instruction for use (sand clock symbol). Approval marking: CE 0158 |
| 4.2 | Instructions for use | <u>Standard IFU with main languages:</u> English, French, German, Spanish, Portuguese, Italian, Norwegian, Swedish, Danish, Dutch, Greece, Turkish
<u>Additional IFU South-East Europe:</u> Bulgarian, Rumanian, Slovenian, Slovak, Czech, Hungarian
<u>Additional IFU North-East Europe:</u> Finnish, Estonian, Lithuanian, Latvian, Polish, Russian
<u>Additional IFU Asia:</u> Chinese |

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 filter per carton, incl. 1 standard IFU (additional IFU if required) |

6.0 User Notes

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| 6.1 | System usability | Suitable for all full face masks with standard thread Rd40 according to EN 148-1 (Rd 40 mm x 1/7"), e.g. Dräger X-plore® 6300 / 6500 |
| 6.2 | Limitations | The filter conforms to the minimum requirements of the standard indicated by the class and type of the filter it is marked with. It must be noted that laboratory values can differ from those measured in practice. 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 mandatory (see in particular the limitations in use). Further information on request. |

Dräger Safety AG & Co. KGaA