
Data Sheet: CBRN filter



Filter for CBRN use

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|-----------------------------------|---|
| Description | CBRN (chemical, biological, radiological, nuclear) canister, cap 1 |
| Usage | Protection against particulates, dust, smoke, fumes, bacteria, chemical and biological warfare agents, ammonia, and a wide range of organic, inorganic and acid gases |
| Material | Housing of ABS/PC plastic |
| Weight | 495 g |
| Breathing resistance | <50 mm H ₂ O (4.9 mbar at 85 l/min) |
| Particle filter medium | Non-woven hydrophobic fibreglass paper, mechanical filtration |
| Particle filter efficiency | — P4 penetration <0.003% using paraffin oil at 95 l/min — P4 high flow penetration 0.01% using paraffin oil at 250 l/min |
| Gas filter capacity | Service life exceeds 15 minutes for CBRN PAPR for the test gases below. Tests are conducted at 64 l/min. |

| Compound | Conc. (ppm) | B'thru (ppm) | Serv. life (min) |
|----------------|-------------|-----------------------------------|------------------|
| Ammonia | 2,500 | 12.5 | >15 |
| Cyanogen chl. | 300 | 2 | >45 |
| Cyclohexane | 2,600 | 10 | >15 |
| Formaldehyde | 500 | 1 | >45 |
| Hydr. cyanide | 940 | 4.7* | >45 |
| Hydr. sulphide | 1,000 | 5 | >45 |
| Nitr. dioxide | 200 | 1 (NO ₂) or 25 (NO)** | >15 |
| Phosgene | 250 | 1.25 | >45 |
| Phosphine | 300 | 0.3 | >45 |
| Sulph. dioxide | 1,500 | 5 | >15 |

*) Sum of HCN and C₂N₂

**) Nitrogen dioxide breakthrough is monitored for both NO₂ and NO. The breakthrough is determined by which quantity, NO₂ or NO, reaches breakthrough first.

Chemical agent permeation resistance:

CBRN canister cap 1 tested with FP-C CBRN air purifying respirator and SE40 CBRN PAPR on a breathing machine set at 40 l/min against distilled sulphur mustard (HD) and sarin (GB) as per table below:

| Agent | Conc. | Dur. (min) | Max b'thru (mg-min/m ³) | Min serv. life (h) |
|-----------|-----------------------|------------|-------------------------------------|--------------------|
| HD-vapour | 50 mg/m ³ | 30 | 3.0 | 8 |
| HD-liquid | 0.43 – 0.86 ml | 120 | 3.0 | 2 |
| GB | 210 mg/m ³ | 30 | 1.05 | 8 |

Storage period

10 years in unbroken foil packaging

Visor

Abrasion-resistant hard-coated Polycarbonate material