CBRNF12CE

CBRN FILTER CANISTER

The CBRNF12CE meets the performance requirements of European standard EN141, A1B2E1K1P3 specification and is approved to PPE directive 89/686/EEC by TNO certification.

When combined with an appropriate chemical protective mask, the CBRNF12CE filter canister protects the face, eyes and gastro-intestinal tract of the wearer against all known chemical and biological agents in aerosol, liquid and vapour form including:

a. Nerve Agents

"G" Series
"V" Series
Any thickened form of agent

c. Blood Agents

Hydrogen Cyanide
Cyanogen Chloride

b. Blister Agents

Mustard
Lewisite
Any thickened form of agent

d. Riot Control Agents

CS
CN
OC (Pepper Spray)
Chloropicrin

The Avon CBRNF12CE filter canister also meets the relevant criteria specified in the new NIOSH CBRN APR standard at the 15-minute classification level (Cap 1). It provides effective protection against all the gaseous agents specified in the NIOSH standard, as well as excellent performance against a wider range of both chemical warfare agents and Toxic Industrial Chemicals (TICs). A particulate filter element exceeding the requirements of NIOSH 42CFR84 P100 level is incorporated, ensuring effective performance against all dusts, mists, fumes, biological agents (bacteria, virus, fungal spores etc), including radioactive dusts. CBRNF12CE is currently certified by NIOSH as a CBRN Cap 1 APR filter for use with the CBRN FM12 mask under TC-14G-0275.

The protection against many Toxic Industrial Chemicals (TICs) includes, but is not limited to: organic vapours with a boiling point over 65°C, chlorine, hydrogen sulfide, sulfur dioxide, formaldehyde, nitrogen dioxide, phosgene, phosphine and ammonia.

EFFECTIVENESS

Against Chemical and Biological Agents

Performance against the gaseous agents specified in the NIOSH CBRN APR standard and also for chemical warfare agents.

Note that the protection time is indicated for standard test conditions. THESE DO NOT NECESSARILY RELATE TO ACTUAL USE TIMES.

Threat	Challenge Concentration	Protection Time
Nerve Agent		>175 mins
Hydrogen Cyanide	940ppm	>35mins
Cyanogen Chloride	300ppm	>60mins
Chloropicrin	5000mg/m3	>60mins
Ammonia	2500ppm	>15 mins
Cyclohexane	2600ppm	>20mins
Formaldehyde	500ppm	>60mins
Hydrogen sulphide	1000ppm	>100mins
Nitrogen dioxide	200ppm	>20mins
Phosgene	250ppm	>100mins
Phosphine	300ppm	>20mins
Sulfur dioxide	1500ppm	>15mins

Actual use times must be verified on the basis of a risk assessment of the likely hazards present in the intended use area.

The filter canister has been tested for particulate aerosols in accordance with NIOSH 42CFR84 P100 using hot DOP aerosol at 85 l/min. The penetration through the canister was found to be less than 0.001% (1 in 10^5).

DESCRIPTION

Construction materials

a) The canister body is made of Noryl, a polyphenyloxide co-polymer, which is a high quality engineering construction polymer. It provides a very robust product which is extremely durable against shock and impact in operational use. The canister body is black in colour.

b) Gas absorption is by proprietary chrome free activated charcoal impregnated with metallic salts and other compounds to provide a balanced performance against both physically and chemically adsorbed species.

c) The high efficiency filter element is made of glass fibre/vinyon copolymer co-pleated with polypropylene net for structural strength.

d) The CBRNF12CE is entirely non-ferrous and non-magnetic.

Specification

Dimensions:	115 mm diameter x 61mm height from thread shoulder
Weight:	320 g approx
Thread:	40 mm to NATO STANAG 4155/EN148-1/NIOSH APR CBRN

PACKAGING

CBRNF12 is foil packed and supplied in a box of 4 with 1 instruction leaflet per box. They therefore must be ordered in multiples of 4.

PERFORMANCE

Breathing resistance

480 Pa @ 85 l/min airflow (40mmWG) or less.

Environmental

The materials used and the method of construction of the filter canister has been designed for operation and storage in accordance with NIOSH CBRN criteria. When stored in its original packaging the filter canister retains its operational effectiveness and efficiency with no degradation to its performance under the following environmental storage conditions:

a) **Temperature –32°C to 71°C**
The filters have been exposed to high and low ambient storage temperatures without harmful effects.

b) **Humidity range – 0% to 88% RH**
The filter has been tested following storage in high humidity environments and has found to be effective.

c) **Rain**
The filter will retain its effectiveness in heavy rainfall conditions and it is not prone to water ingress.

d) **Salt Breeze**
The filter will not deteriorate with exposure to salt breezes for 24 hours.

e) **Sand and Dust**
The filter will not deteriorate when exposed to 24 hours of wind driven sand and dust conditions.

Shelf life

The predicted shelf life of the filter canister (sealed and packaged) is 5 years.

WARNINGS

- This device does not provide oxygen and must not be used in an oxygen deficient atmosphere or confined space.
- Must not be used for fire fighting or for protection against airborne products of combustion.
- Should only be used as part of a managed respirator program.
- Customer must verify that the filter is suitable for the intended application.
- Respirator filters are not suitable for all gases/vapors. Customer should verify that the filter is suitable for gases/vapors likely to be encountered. Consult Avon if unsure.
- Once exposed to a suspected contaminant, the filter will usually require replacement, and must be disposed of as contaminated waste. Re-use of exposed filters is only permitted in certain controlled circumstances and as part of a managed program, consult Avon if unsure.

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