CBRNCF50

CBRN FILTER

- **Convertible shape providing low profile**
- **Unique Humidity Indicator**
- **5.5 year shelf life**
- **Ruggedized packaging**

The Avon CBRNCF50 canister meets the NIOSH CBRN APR standard at the 15-minute classification level (Cap 1), the EUROPEAN STANDARD, EN 14387 (A1B2E1K1 P3), and the relevant criteria specified in the NATO Triptych for protection against chemical and biological warfare agents in aerosol, liquid form.

It provides effective protection against all the gaseous agents specified in the NIOSH CBRN 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 and EN 14387 (P3) is incorporated, ensuring effective performance against all dusts, mists, fumes, biological agents (bacteria, virus, fungal spores etc), including radioactive dusts. When combined with an appropriate chemical protective mask, the CBRNCF50 filter canister protects the face, eyes and gastrointestinal tract of the wearer against known chemical and biological agents in aerosol, liquid and vapor form including:

a. Nerve Agents	c. Blood Agents
"G" Series	Hydrogen Cyanide
"V" Series	Cyanogen Chloride
Any thickened form of agent	

b. Blister Agents	d. Riot Control Agents
Mustard	CS
Lewisite	CN
Any thickened form of agent	OC (Pepper Spray)

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

TIC/TIM Capable **5.5 Year Shelf Life** **Chromium Free**

DESCRIPTION

Construction materials

The canister body is made of a modified polyphenylene ether-polystyrene blend (PPE&PS), 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 color and has a spark finish to reduce reflection.

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

The high efficiency filter element is made of PTFE, PET/PE.

The CBRNCF50 is entirely non-ferrous and non-magnetic.

SPECIFICATION

Dimensions	
Diameter	Ø111mm
Weight	365 grams (typical)
Thread	40mm to NATO STANAG 4155
Color	Black

PERFORMANCE

Breathing resistance
45mm of H_2O @ 85 l/min (typical)

EFFECTIVENESS

Against Chemical and Biological Agents
Typical performance against the gaseous agents specified in the NIOSH CBRN APR standard, chemical warfare agents and also for industrial agents TIC/TIMs is detailed below.

Threat	Challenge Concentration (PPM)	Protection Time (Minutes)
Nerve Agent	**87**	**>180**
Hydrogen Cyanide	**940**	**>100**
Cyanogen Chloride	**300**	**>80**
Ammonia	**2500**	**>20**
Cyclohexane	**2600**	**>30**
Formaldehyde	**500**	**>200**
Hydrogen Sulfide	**1000**	**>100**
Nitrogen Dioxide	**200**	**>20**
Phosgene	**250**	**>400**
Phosphine	**300**	**>375**
Sulfur Dioxide	**1500**	**>20**
Industrial Agents TIC/TIMS		
a-Chloroacetophenone (CN)	16	>480
o-Chlorobenzylidene Malonitrile (CS)	3	>480
Hydrogen Sulfide	5000	>30
Hydrogen Fluoride	1000	>60
Hydrogen Chloride	5000	>30
Methylamine	5000	>20
Chlorine	5000	>20

Note that the protection time is indicated for standard laboratory test conditions. THESE DO NOT NECESSARILY RELATE TO ACTUAL USE TIMES. Actual use times must be verified on the basis of a risk assessment of the likely hazards present in the intended use area.

The performance of the canister is, of course, dependent upon the actual concentration encountered. Protection against riot control agents exceeds NIOSH 42 CFR84 requirements for CS and CN. The filter canister can be changed under all operational conditions in 9 seconds.

NIOSH

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HUMIDITY INDICATOR

A unique standard humidity indicator is located on the top of the CBRNCF50 filter and visually displays performance degradation due to moisture uptake over time. The indicator turns white to blue signaling that the unit pack was compromised and the filter must be discarded.

ENVIRONMENTAL

The materials used and the method of construction of the filter canister have been designed to meet operation and storage requirements in accordance with NIOSH CBRN criteria. When stored in its original packaging the filter canister retains its operational effectiveness and efficiency under the following environmental storage conditions:

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

Humidity range 5% to 100% RH
The filter has been tested following storage in high humidity environments and has been found to be effective.

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

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

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

Recommended Storage and Shelf Life
The predicted shelf life of the filter canister (sealed and packaged) is 5.5 years when stored between 14°F and 122°F (-10°C and 50°C) <80% RH.

PACKAGING

The rugged exterior filter container is designed to be stackable, tamper evident and includes relevant information such as lot number and expiration date.