CBRN filter

filter canister **NBC-3/SL M**

Type: A2B2E2K2HgSXP3 D R REACTOR

The filter canister in combination with a full-face mask, mouthpiece assembly or PAPR provides reliable protection of air passages against a wide range of harmful and highly toxic substances including all known CBRN agents. Filters are produced with standard round threads according to STANAG 4155 (EN148-1)-Rd40x1/7"or GOST8762-75-40x4mm.
Filter components are made of hard plastic. It provides a very robust product which is extremely durable against shock and impact damage in operational use. The canister body (filter housing) can be made in three standard colours.

Standard colours of filter housing:

black **green** **beige (desert tan)**

Technical data		Breathing resistance in Pa		Breathing resistance in Pa	
Diameter	110 mm	@ flow rate 30l/min.		@ flow rate 95l/min.	
Height	85 mm	EN 1)	NBC-3/SL M	EN 1)	NBC-3/SL M
Weight	335 g ±5%	260	<140	980	<600
Storage time	20 years (factory sealed)				

Type and Class		Particle filter efficiency @ flow rate 95 l/m		
A2 - organic gases and vapours	SX - CG, CK, PS		EN	NBC-3/SL M
B2 - inorganic gases and vapours	P3 - particles	Sodium Chloride NaCl (S)	99,95	>99,999
E2 - acid gases and vapours	D - dust	Paraffin oil (L)	99,95	>99,999
K2 - ammonia and amines	R - reusable			
Hg - mercury vapours	REACTOR - radioactive iodine			

Note:
1) requirement of European Standard EN 14387+A1
2) the filter was tested on dolomite dust clogging
3) radioactive iodine and its organic compound - methyliodide^{131} acc. to standard DIN 58621

Part No: connection thread acc. to EN 148-1 / STANAG 4155 (40x1/7“) - 1704 connection thread acc. to GOST 8762-75 (40x4mm) - 2704

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APPLICATION:

The filter canister in connection with suitable respirator or PAPR provides protection against solid and liquid particles, pepper spray (OC), smoke- producing substances, radioactive particles, bacteria and rickettsia, fungi, toxins, viruses, Riot Control agents (Lachrymators, Sternutators, Vomiting agents), Blister agents (Vesicants), Choking agents, Blood agents, Nerve agents, Incapacitants, Herbicides, Pesticides and TIC, such as bromoacetone, CS, CR, CN, CNC, CNS, CA substances, organic compounds of arsenic - diphenyl- dichlorarsine - CLARK I (DA), diphenylcyanoarsine - CLARK II (DC), adamsite (DM), diphenyldichlorarsine (DA), ethyldichlorarsine (ED), methyldichlorarsine (MD), mustard gas (H), sulphur mustard gas (HD), T-mustard gas, Q-mustard gas, nitrogen mustard gases (HN1, HN2, HN3), lewisite (L), mixed mustard gas (H-L), phosgene oxime (CX), phosgene (CG), diphosgene(DP), chloropicrin (PS), hydrogen cyanide (AC), cyanogen chloride (CK), arsine (SA), G-agents: sarin (GB), cyclosarin (GF), soman (GD), tabun (GA), IVA (GV), V-agents: VX, VR, VE, VG (amiton), VM and toxic industrial chemicals such as: fumes of organic or inorganic acids, hydroxides, organic solvents with the boiling point above 65 °C, ammonia, amines, inorganic and acid gases, agricultural chemical combustion gases, other toxic substances, e.g. benzene, toluene, vinyl chloride, fluorine, hydrogen fluoride, sulphur oxides, chloracetic acid, aldehydes, mixtures of inorganic acids, and organic substances, mercury vapors, radioactive iodine ans its organic compounds, etc.

LIFE TIME:

Breakthrough time of a filter is tested according to EN 14387+A1 at humidity 70% and flow rate 30 l/min, which is equivalent to the volume of air per minute used by an average person carrying out medium heavy work. The approximate life time (usage time) of a filter may, under normal conditions, calculated by comparing the concentration at the workplace and the minimum Dynamic Adsorption Capacity (DAC) for the filter

$$T = \frac{DAC \times 1000}{AF \times C}$$

T	Approximate usage time in minutes
DAC	Dynamic Adsorption Capacity in grams (see table)
AF	Airflow (air consumption) in l/min (in normal conditions 30 l/min)
C	Concentration of toxic gas in mg/l

	Testing Gas		Concentration of testing gas ppm	mg/l	Breakthrough time in minutes EN requirement	NBC-3/SL	DAC in grams NBC - 3/SL
A2	Cyclohexane	C_6H_{12}	5000	17,5	35	39	20,475
B2	Chlorine	Cl_2	5000	15	20	45	20,250
	Hydrogen Sulphide	H_2S	5000	7,1	40	>80	>17,400
	Hydrogen cyanide	HCN	5000	5,6	25	50	8,400
E2	Sulphur dioxide	SO_2	5000	13,3	20	25	9,975
K2	Ammonia	NH_3	5000	3,5	40	50	5,250
Hg	Mercury	Hg	------	13 mg/m^3	100 hours	>170 hours	>3,900
SX	Cyanogen chloride	ClCN	2500	6,28	20	25	4,710
	Chloropicrin	CCl_3NO_2	5000	33,55	20	44	44,286
	Phosgene	$COCl_3$	5000	20,24	20	>77	>47,058
REACTOR	Methyloidide[131]	CH_3I			2 hours	>2 hours	

STORAGE AND MAINTENANCE:

The filters are sealed in plastic bags by the manufacturer. Store the filters unopened in a clean place at even temperature, most appropriate at -5 to +30°C and relative humidity below 80%. Sealed filters tolerate also conditions of -30 to +50°C and RH below 95%. The storage period (month and year) for filters is marked on the filter label. Do not try to regenerate the filters. Never clean the filters with compressed air or compressed water.

DISPOSAL:

After use, the filters are special refuse. Make sure that they are disposed according to the filtered substance/s (gases or particles) in accordance with current waste treatment regulations. If the product is to be disposed, it should be dismantled from the respirator and disposed as solid waste. Please see local authority regulations for disposal advice and locations.