X-Armor s.r.o.
Czech Republic
www.x-armor.cz

The NBC-3SL SOF filter canister, in combination with a full-face mask, mouthpiece assembly, or PAPR, reliably protects air passages against a wide range of harmful and highly toxic substances including **all known CBRN agents.**

The filters are produced with standard round threads according to STANAG 4155 (EN 148-1)- Rd 40x1/7". The filter components are made of hard plastic. This results in a very robust product that is extremely durable against shock and impact damage in operational use.

KEY FEATURES:

- Compatible with standard 40mm NATO threaded respirators, which are widely available.
- 20-year shelf life - save money long-term by not having to replace your filters every 5 years
- Used by military personnel, CBRN specialists, and special operations forces all over the world
- Filter all known CBRN agents, including radioactive iodine, rated for A2B2E2K2HgSXP3 D R.
- Certified by European agencies and has the “CE” symbol. Compliant under EN 14387:2004 + A1:2008

Technical data	
Diameter	10 mm
Height	85 mm
Weight	335 g ±5%
Storage time	20 years (factory sealed)

Breathing resistance in Pa		
@ flow rate 30l/min.		
EN 1)	NBC-77 SOF	
260	<140	

Breathing resistance in Pa	
@ flow rate 95l/min.	
EN 1)	NBC-77 SOF
980	<600

Type and Class	
A2 - organic gases and vapours	SX - CG, CK, PS
B2 - inorganic gases and vapours	P3 - particles
E2 - acid gases and vapours	D - dust
K2 - ammonia and amines	R - reusable
Hg - mercury vapours	REACTOR - radioactive iodine

Particle filter efficiency @ flow rate 95 l/m		
	EN	NBC-77 SOF
Sodium Chloride NaCl (S)	99,95	>99,999
Paraffin oil (L)	99,95	>99,999

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

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APPLICATION:

The filter canister in connection with a 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 - diphenyldichlorarsine - 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 a 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, chloroacetic acid, aldehydes, mixtures of inorganic acids, and organic substances, mercury vapors, radioactive iodine, organic compounds of iodine (Iodomethane, 129, 131), radioactive particles, etc.

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

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-77 SOF	DAC in grams NBC-77 SOF
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	$COCl_2$	5000	20,24	20	>77	>47,058
REACTOR	Methyloidide[131]	CH_3I			2 hours	>2 hours	

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LIFETIME:

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 lifetime (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.

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.