



NBC-77

GAS MASK FILTER

For CBRN Defense

The NBC-77 SOF 40mm gas mask 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.

TECHNICAL DATA	
Diameter	110 mm
Height	85 mm
Weight	335 g±5%
Storage time	20 years (factory sealed)

TYPE AND CLASS	
A2 - Organic gases and vapors	SX, CG, CK, PS
B2 - Inorganic gases and vapors	P3 - Solid particles and liquid aerosols
E2 - Acid gases and vapors	D - dust
K2 - Ammonia and amines	R - reusable
Hg - Mercury vapors	REACTOR - radioactive iodine

BREATHING RESISTANCE IN PA			
@ flow rate 30 l/min.		@ flow rate 95 l/min.	
EN	NBC-77 SOF	EN	NBC-77 SOF
260	<140	980	<600

PARTICLE FILTER EFFICIENCY @ FLOW RATE 95 L/M		
	EN	NBC-77 SOF
Sodium Chloride NaCl (S)	99.99+	99.99+
Paraffin oil (L)	99.99+	99.99+

NOTE:

- 1) Requirements of European Standard EN 14387+A1
- 2) The filter was tested on dolomite dust clogging
- 3) Radioactive iodine and its organic compound - methyl iodide acc. to standard DIN 58621

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.

LIFETIME

Breakthrough time of a gas mask 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, be 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
 D Dynamic Adsorption 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		BREAKTHROUGH TIME IN MINUTES EN REQUIREMENT	NBC-77 SOF	DAC IN GRAMMS NBC-77 SOF
	PPM	MG/L			
A2 Cyclohexane C6H12	5000	17.5	35	39	20.475
B2 Chlorine Cl2	5000	15	20	45	20.250
- Hydrogen Sulphide H2S	5000	7.1	40	>80	>17.400
- Hydrogen Cyanide HCN	5000	5.6	25	50	8.400
E2 Sulphur Dioxide SO2	5000	13.3	20	25	9.975
K2 Ammonia NH3	5000	3.5	40	50	5.250
Hg Mercury Hg	-----	13 mg/m³	100 hours	>170 hours	>3.900
SX Cyanogen chloride ClCN	2500	6.28	20	25	4.710
- Chloropicrin CCl3NO2	5000	33.55	20	44	44.286
- Phosgene COCl2	5000	20.24	20	>77	>47.058
REACTOR Methyloide131 CHI3	-	-	2 hours	>2 hours	-

STORAGE AND MAINTENANCE

- Each NBC-77 SOF gas mask filter is sealed in a plastic bag 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, gas mask filters are considered special refuse. Make sure that they are disposed of according to the filtered substance (gases or particles) in accordance with current waste treatment regulations.
- If the product is to be disposed of, it should be dismantled from the respirator and disposed of as solid waste. Please see local authority regulations for disposal advice and locations.