3M™ Scott™ M98 Respirator

Product description

The 3M™ Scott™ M98 Respirator, with its EN148-1 compliant 40mm thread, meets the requirements of the European Standard EN136:1998+A1:2003, and BS8468-2:2006+A1:2007. The 3M™ Scott™ M98 Respirator provides respiratory protection for use in environments where wearers will be exposed to hazardous gases, liquids and particles.

Applications

The 3M™ Scott™ M98 Respirator is suitable for Civil Defence, Law Enforcement, Public Order and other First Responder applications, protecting against Toxic Industrial Chemicals (TIC) and Chemical, Biological, Radiological and Nuclear (CBRN) warfare agents, including gases and vapours from organic compounds with a boiling point above 65°C Inorganic gases and vapours, e.g. Chlorine, Hydrogen Sulphide and Hydrogen Cyanide. Acid gases and vapours, e.g. Sulphur Dioxide Ammonia and organic ammonia derivatives Other gases and vapours: Phosphine, Formaldehyde, CN, CS, Cyanogen Chloride and Chloropicrin. Solid and liquid toxic and radioactive particulates and micro-organisms, e.g. bacteria and viruses. Respiratory protection is only effective if it is correctly selected, fitted and worn throughout the time when the wearer is exposed to hazards.

Product

The 3M™ Scott™ M98 Respirator is available in the following part number.

Part Number	Description	NATO Stock Number
5013030	M98 M with textile harness	*N/A*
5013031	M98 S with textile harness	*N/A*
5013010	M98 M with NR Harness (EN approved version)	*N/A*
5013011	M98 S with NR Harness (EN approved version)	*N/A*
7000780	M98 S with Textile Harness for twin DIN 40 Canisters	*N/A*
7000781	M98 M/L with Textile Harness for twin DIN 40 Canisters	*N/A*
7000836	M98 w/o drinking w/ rubber harness	*N/A*
5013029	M98 M/L with bottle and NR Harness (EN approved version)	*N/A*
5013032	M98 S with bottle and NR Harness (EN approved version)	*N/A*

Technical Features

- Filter Body Style - DIN40mm Thread (EN148-1)
- Shelf Life 12 years (factory sealed, plastic bag). *The shelf life as defined above remains an indicative and maximum data, subject to many external and non-controllable factors. It may never be interpreted as a warranty.*

The 3M™ M98 Full Face Respirator is easy to use and comfortable for the wearer. Available with DIN40 connections on both sides of the facepiece facilitate left- or right-handed operation. The DIN40 inhalation ports are designed for use with approved DIN Thread Filter Canisters. The main features include:

- Slim-line and compact design allows easy fitting and integration with police helmets and visors
- The Halo-Butyl elastomer facepiece provides resistance to chemicals and ageing effects of ozone and high temperatures.
- Polycarbonate visor features high tensile strength and excellent light transmission.

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- Sweat port in the chin pocket for added comfort during extended wear periods
- Soft silicone face seal for comfort during long periods of work.
- Wide field of vision with a scratch and chemical resistant polyamide lens.
- Inner mask is equipped with peripheral sealing edge to reduce dead space
- Adjustable 5-point head harness with elastic straps located at the forehead, temples, and cheeks comes together at a rectangular head pad.
- Tube free drinking system double-threaded connector is compatible with M 95 Canteen or Camelbak™ (S Type) Adapter.
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CBRN & TIC TESTING

- Breathing Resistance

The breathing resistance of the 3M™ M98 respirator is tested during inhalation (continuous flow) and exhalation (cyclical flow). The breathing resistance of the respirator shall not exceed the following limits:

Inhalation Resistance	3M™ Scott™ M98 Respirator	EN136 Requirement
@ 30 L/min	<0.5 mbar	<0.5 mbar
@95 L/min	<1.5 mbar	<1.5 mbar

Exhalation Resistance	3M™ Scott™ M98 Respirator	EN136 Requirement
@ 160 L/min	<3.0 mbar	<3.0 mbar

Parameter	3M™ Scott™ M98 Respirator	EN136 Requirement
CO_2 Content	<1.0%	<1.0%
Field of Vision	>70%	>70%
Hydration Rate	N/A	N/A
Total leakage	<0.05%	0.05%

Tested at BSI (Report Number 255/7958058), the *Research Centre of the Finnish Defence Forces (Technical Evaluation 318/Da) and #ProQares (Report Number 64008-61196), the 3M™ Scott™ M98 Respirator also meets the requirements of the European Standard EN136:1998+A1:2003. The values above are the result of illustrative lab test measures and shall not be considered as a commitment from 3M.

Chemical Warfare Agents

The specially engineered *"Pro-Comp"* halo-butyl elastomer of the facepiece has enhanced resistance to known CBRN agents. For example, the 3M™ Scott™ M98 Respirator has been tested at TNO (TNO Report PML 1998-C79) against liquid Sulfur mustard (HD) and lewisite (L). The values below are the result of illustrative lab test measures and shall not be considered as a commitment from 3M.

Test Agent	Breakthrough Time (Hours) - ProComp
HD	>24
Lewisite	>24

The 3M™ M98 Respirator has also been SMARTMAN tested against Sarin (GB) and Sulfur Mustard agent (HD), when used in conjunction with the 3M™ Scott™ CFR32 CBRN A2B2E2K2-P3 R (P/N 5543689) or CFR32 CBRN A2B2E2K2-P3 R (P/N 5045155) filters, according to BS8468-2:2006+A1:2007. Tested at ProQares (Report Number 64008-61196) the 3M™ M98 Respirator, when used in conjunction with the above filters meets and is certified (Report Number 696729) to the requirements of European Standard BS8468-2:2006+ A1:2007.

Test Agent	Breakthrough Time (Mins) - M98
HD	Pass
GB	Pass

Material

The following materials are used in the production of the 3M™ Scott™ M98 Respirator:

Component	Material
Mask	Halo butyl elastomer compound; Butyl IIR, EPDM and NR
Inner mask	Liquid silicone (colour: transparent)
Visor	Polycarbonate PC Optional: Polycarbonate Hard Coated PC HC
Visor Frame	Polyamide, PA
Valve discs	Silicone
Head harness	Natural rubber NR headband. - Optional: Textile harness, PES polyester fibre net and Lycra™ coated elastic band
Drinking bottle	HDPE
Spectacle frame	Polyamide

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Weight

The 3M™ Scott™ M98 Respirator weighs 580g (Medium) and 570g (Small).

Disposal

Contaminated products should be disposed as hazardous waste in accordance with national regulations.

Carriage

Tactical carrying bag for respirator and 1-2 filters. Size (h x d x b) 26 x 14 x 20 cm. The bag is made from polyurethane (PU) coated polyamide (PA) cloth. Hook and loop fastening tapes. Polyamide texture carrying strap. Can be carried either as a shoulder bag at the waist as a belt bag. Alternative carrier is the Polyethylene (HDPE) stowage box for respirator and filter. Size 25 x 14 x 17.5 cm. Cotton strap.

Cleaning and Storage

- **Respirator**

Remove the filter, valves/discs, drinking device, spectacle frame, speech diaphragm and inner mask. Clean the facepiece and components with a damp cloth or sponge, using lukewarm water and mild detergent (neutral, pH 6-8) (e.g. washing-up liquid). A brush can be used for stubborn dirt (be careful not to scratch the lenses). Do not use solvents (e.g. alcohol, acetone, turpentine), hot water or bleaching agents (perborate, percarbonate).

- **Drinking device**

Remove the mouth piece and wash it separately. Put water in a bottle. Connect the bottle to the drinking device. Squeeze the bottle and let water pass through the drinking device. Replace the mouth piece when the mask is given to another user.

- Storage

The respirator should be stored carefully cleaned, disinfected and ready for use. Keep the respirator protected from sunlight, grease and oil. The store should be dry and cool. A properly stored, unused respirator (factory sealed, plastic bag) has a shelf life of 12 years. Before use, the respirator must undergo a user seal check. After use, an opened filter must be sealed tightly if it is to be reused, but it must be replaced within 6 months at the latest.

Fitting Instructions

Before assigning any respirator to be worn in a contaminated area, we recommend that a qualitative or quantitative fit testing be performed before entering the workplace. Fitting instructions must be followed each time the respirator is worn.

1. Fully loosen all five head straps, and then place the harness over the back of the head and position respirator over the face.

2. Pull the ends of the five straps to adjust tightness. Check that the chin is in the chin pocket. Tighten the straps. Start with neck straps, pull backwards (not outwards). Then adjust the temple straps and finally the upper strap. The cradle/net lies centred on the back of the head.

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3. Once the harness has been secured. Cover the exhalation opening of the respirator with your hand. Exhale gently to create overpressure. There must be no leakage between the face and the face seal.

4. Cover the filter opening with your hand. Inhale to make the respirator press onto your face. If you fail to get a tight fit (i.e., experience potential leakage), adjust the head harness and filter, or use another size of the respirator.

Storage temperature

The 3M™ Scott™ M98 Respirator has a storage operating profile of -10 C to + 50 °C (factory sealed)

Approvals

Assembled in UK, in an ISO9001:2015, ISO14001:2015 and latest ISO18001:2007 certified plant. The 3M™ Scott™ M98 Respirator was tested to and is certified to Class 3 of the European Standard EN136:1998+A1:2003 (CE Certificate Number 696729). The 3M™ Scott™ M98 Respirator is also CE approved as a APR (Air Purifying Respirator) system (Respirator + Canister) when used with either the CFR32 CBRN A2B2E2K2-P3 R (P/N 5543689) or CFR32 CBRN A2B2E2K2-P3 R (P/N 5045155) filters (CE Certificate Number 696729) according to BS8468-2:2006+A1:2007.

Spare Parts

Part Number	Description	NATO Stock Number
5512790	Spectacle kit	N/A
5012870	Hydration kit M 98	N/A
5012593	Drinking bottle	N/A
5510185	Hard plastic carrying case	N/A
5012595	Green carrying bag for respirator and filter	N/A
5141080	Protester apparatus	N/A
5512695	Visor PC	N/A
5512795	Visor HC PC hard coated	N/A

Filters

Part Number	Description	NATO Stock Number
5045155	CFR32 CBRN A2B2E2K2-P3 R	4240-99-849-7088
5543689	CFR32 CBRN A2B2E2K2-P3 R	4240-52-000-6161
5543699	CFR32 CBRN A2B2E2K2-P3 R	N/A
5045125	CFR22 NBC2200 A1P3	N/A

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WARNINGS and USE Limitations

1. These respirators do not supply oxygen. Do not use in oxygen deficient areas. *
2. Do not misuse, alter, modify or repair this product.
3. Do not use with beards or other facial hair that prevent direct contact between the face and the edge of the respirator.
4. Leave the contaminated area immediately and check the integrity of the respirator and replace the respirator if:
    - Damage has occurred or is apparent.
    - Breathing becomes difficult or increased breathing resistance occurs.
    - Dizziness or other distress occurs.
    - You taste or smell the contaminant, or an irritation occurs.
5. Store this device in a sealed container away from contaminated areas when not in use.
6. Use strictly in accordance with respirator and filter user instruction leaflet.

* 3M definition minimum 19.5% by volume oxygen

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