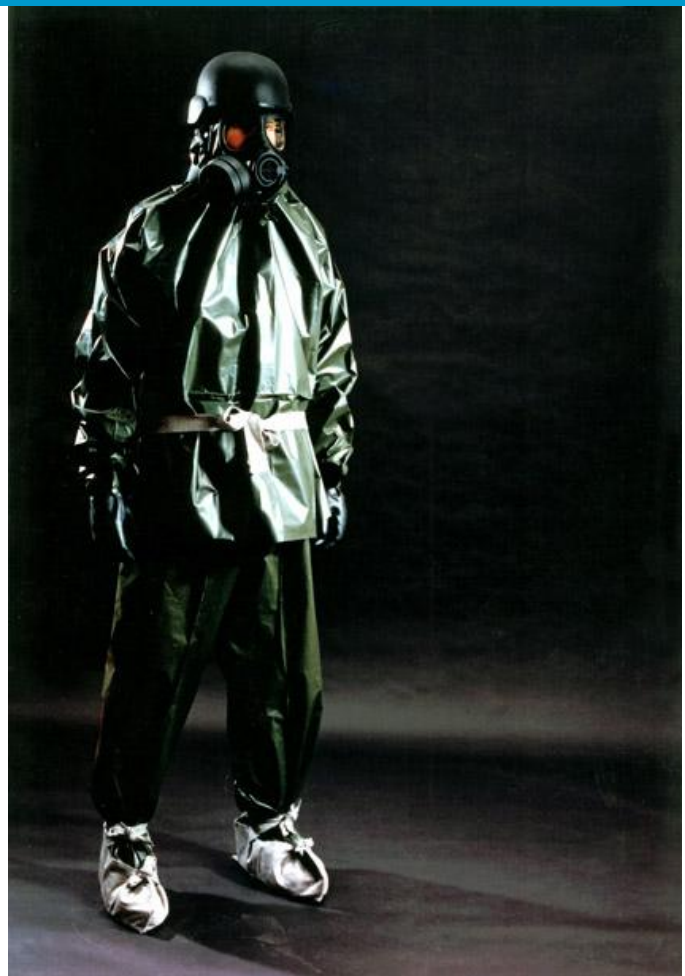


Chemi Cover Dress C/97-L-XL
TECHNICAL SPECIFICATION
TS C/9718-1

- **Disposable**
- **Lightweight**
- **C-proof for more than 6 hours**
- **Dull and Military Green**
- **Two sizes: L & XL**
- **Proven spray tight**



Comments:

Replaces: TS C/9718- 1 of 01-02-20

Encl: Donning Instruction

Pages: 0-13

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1 GENERAL DESCRIPTION

1.1 General Features

- 1.1.1 The Chemi Cover Dresses C/97 and C/97 XL, in the following called C97-L-XL, consists of a jacket with an integrated hood and trousers with integrated foot reinforcements, both manufactured out of the same Chem proof barrier material: Multiflex ELDX 125 Green. A pair of "3-finger" type gloves, in the same material, is available upon request (page 7).
- 1.1.2 In combination with a protective mask, the C/97-L-XL give complete protection against all known chemical warfare agents for more than 6 hours, and most Haz. Chemicals for more than 8 hours.
- 1.1.3 The multi ply thermo plastic film material includes an EVOH barrier to prevent any molecular penetration. However, thermo plastic film can not stand high heat decontamination processes like boiling water or hot air treatment for 2 hours, without showing severe shrinkage. Therefore, if the C/97-L-XL is C-contaminated, it should be considered as disposable.
- 1.1.4 The C/97 have two sizes, L and XL. In order to fit all individual sizes, the integrated hood has neck bands with an adjustable buckle. The jackets itself, is designed with flexible EPDM wristbands and a belt, with two rubber bands attached. The trousers have a waist belt and a pair of braces. The foot covers have four integrated "shoe strings".

1 GENERAL DESCRIPTION

1.2 Function

1. 2. 1 The hood, integrated in the jacket, has a special opening for the protective mask. An extended tip, in the lower sector of the mask opening, has a centre hole for the water supply hose, to be penetrated from the inside, to secure a permanent overlap between the mask opening and the short neck part of the mask. A reinforcement ring is sealed around the opening to ensure flexible fitting to the mask when stretched to surround the filter, the expiratory outlet and goggles. The hood also has neck bands with a buckle to adjusted so, that all surplus hood material is kept out of sight for the wearer and enables full side viewing.
1. 2. 2 Flexible EPDM wrist bands tighten the sleeve openings outside the gloves. Two rubber bands attached to the waist band, offer extra safety.
1. 2. 3 Both sleeves are sealed to the front of the jacket forming one common large sleeve entrance for both arms, which enables both easier manufacturing and easier donning.
1. 2. 4 If the waist belt is tightened up loosely, the trousers will fit any individual size by adjusting the braces. Rear end of belt is fixed with glue.
1. 2. 5 The upper pair of "shoe strings", integrated in each foot cover, is long enough to surround the ankle with crossing directions and be tied at the front, in order to fix the foot cover properly in position around the boot.
- 1.2. 6 Both Foot Covers have three sinuous formed lines of hot melt glue as an Anti Skid Grip to prevent sliding on wet metal or smooth concrete surfaces.

2 APPLICABLE DOCUMENTS

2.1 Manufacturing Drawings (Chemi Cover Dress C/97 L-XL= S/97/L-XL)

- 2.1.1 Drawing No: 497001-1, S/97-L "Jacket / Hood" of 97-11-12
- 2.1.2 Drawing No: 497002, S/97-L "Sleeve and Ring constr." of 97-02-10
- 2.1.3 Drawing No: 497003-2, S/97-L "Trousers" of 97-12-07
- 2.1.4 Drawing No: 497004-1, S/97-XL "Jacket/Hood" of 97-11-12
- 2.1.5 Drawing No: 497005, S/97-XL "Sleeve and Ring constr." Of 97-02-10
- 2.1.6 Drawing No: 497006-2, S/97-XL "Trousers" of 97-12-07
- 2.1.7 Drawing No: 497007-2, S/97 "Foot Covers" of 97-12-07
- 2.1.8 Drawing No: 497008-1, S/97 "Pack+Carry Bag" of 97-12-07
- 2.1.9 Drawing No: 491005, "C-Cover Gloves" (3-fingers) of 94-06-20

2.2 Testing Methods

- 2.2.1 Resistance to Mustard Gas FMV:A 53739
- 2.2.2.1 Thickness ISO 4591 :1992: ISO 4593 : 1993
- 2.2.2.2 Weight per m² DIN EN 22286 = ISO 2286
- 2.2.3.1 Tensile Strength in MPa ISO 1184:1983
- 2.2.3.2 Tensile Strength in Newton DIN 53 455
- 2.2.4.1 Tear Resistance - The "trouser"-shaped test specimen method ISO 6383 - 1:1983
- 2.2.4.2 Tear Strength in Newton DIN 53 363
- 2.2.4.3 Tear Resistance - The Elmendorf method ISO 6383 - 2:1983

2.3 Product Requirements

- 2.3.1 Product Requirements (items 5. 1. 1 - 5. 1. 10 and 5. 2. 1)

- 2.4 **Nato Stock No** for C-Cover Dress S/91 (=S/97)
Main design S/91=S/97=C/97) = **4230 17 110 0048**

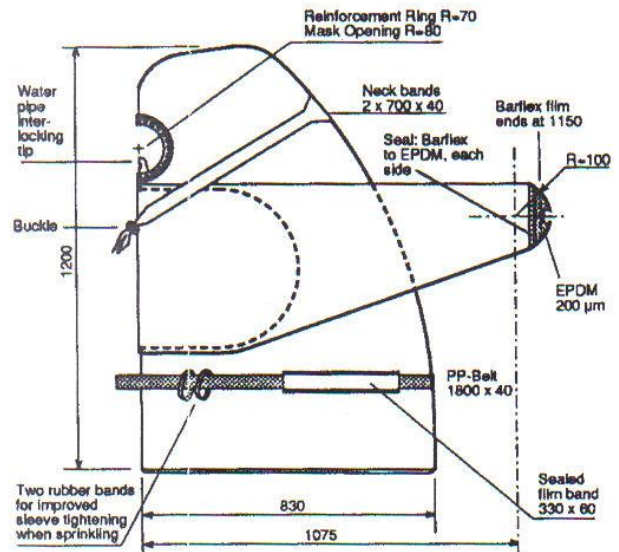
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3 PRODUCT DESIGN

3.1.1 C/97-L Jacket with integrated hood, special mask fit and neck bands

Scale = 1:20

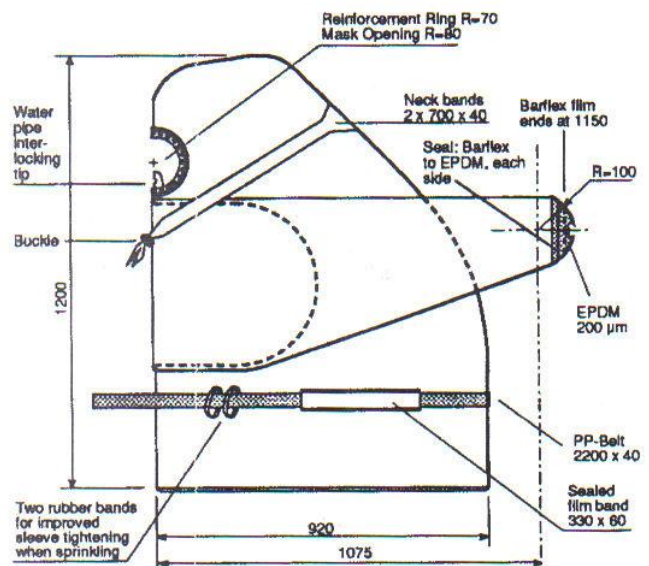
Tolerance = +/- 3%



3.1.2 C/97-XL Jacket with integrated hood, special mask fit and neck bands

Scale = 1:20

Tolerance = +/- 3%



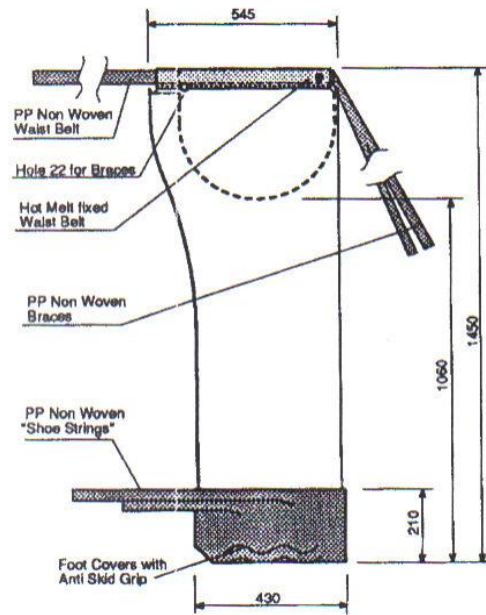
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3 PRODUCT DESIGN

3.2.1 C/97-L Trousers with integrated Foot Covers

Scale = 1:20

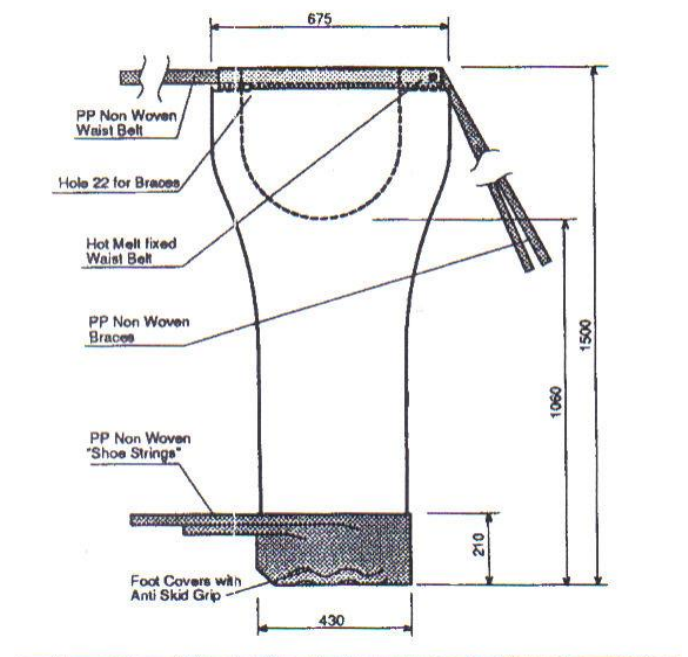
Tolerance = +/- 3%



3.2.2 C/97-XL Trousers with integrated Foot Covers

Scale = 1:20

Tolerance = +/- 3%

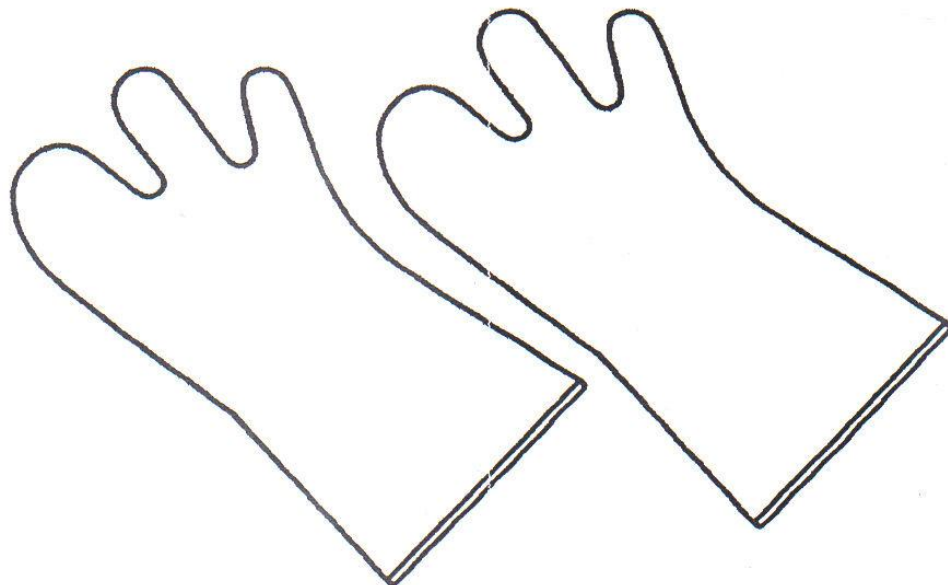


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3 PRODUCT DESIGN

3.3.1 Chemi Cover Gloves (Option –upon request)

Type: 3-Finger Glove (Measure Tolerance = +/- 3%)



Dimensions:

Total length	425 mm
Total width.....	245 mm
Thumb length	70 mm
Thumb entering width	48 mm
Forefinger length	90 mm
Forefinger entering width	48 mm
3-finger pocket length	95 mm
3-finger pocket entering width ...	95 mm
Entering width	220 mm
Width of seam.....	2.5-3.0 mm

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4 MATERIAL SPECIFICATION

- | | | |
|-------|---|---|
| 4.1 | <u>Film Material</u> | Multiflex ELDX 125 green
(LDPE / EVOH / LDPE) |
| 4.1.1 | Total Thickness: | 125 micron (0,125 mm) +- 10 % |
| 4.1.2 | Weight per sqm: | 120 grams+/-10% |
| 4.1.3 | Co-extruded materials: | Low Density Polyethylene
Co-polymer (EVA) bonding material
Ethylene Vinyl Alcohol (EVOH), barrier |
| 4.1.4 | Colour: | Military Dull Green without IR requirements.
(IR Non-Reflexing, or other colours upon request). |
| 4.1.5 | Surface treatment: | None, dull by nature |
| 4.2 | <u>Fibre Fabric Material</u> | |
| 4.2.1 | Weight per sqm: | 200 grams + - 10 % |
| 4.2.2 | Fibre Polymer: | Polypropylene |
| 4.2.3 | Fabric construction: | Non Woven |
| 4.2.4 | Colour: | Grey |
| 4.3 | <u>Hot Melt Glue and Anti Skid Grip Materials</u> | |
| 4.3.1 | Polymer: | Low Molecular Weight Polyethylene |
| 4.3.2 | Colour: | Non pigmented |

5 PRODUCT SPECIFICATION

5.1 Film Material = Multiflex ELDX 125 Green (Jacket, trousers and Gloves)

	Characteristics	Requirements	Testing Method
5.1.1	Resistance to Mustard Gas	>12 h	FMV:A 53739
5.1.2	Thickness (mm) -"- (µm)	0,125 +/- 10% 125 +/- 10%	ISO 4591:1992 ISO 4593:1993
5.1.3	Weight per sqm (grams)	120 +/- 10%	ISO 2286
5.1.4	Yield Strength (MPa)	>15 (MD / TD)	ISO 1184: 1983 1)
5.1.5	Seal Strength (MPa)	> 12 (MD / TD)	ISO 1184: 1983 1)
5.1.6	Tensile Strength (MPa)	>20/>15 (MD / TD)	ISO 1184: 1983 1)
5.1.7	Tensile Strength (N)	> 37 (MD / TD)	DIN 53 455
5.1.8	Tensile Tear Strength (N/100 µm)	5 / 10 (MD / TD)	ISO 6383-1:1983 2)
5.1.9	Impact Tear Strength (N/100µm)	2/5 (MD/TD)	ISO 6383-2:1983
5.1.10	Tear Strength (N/150 µm)	>8 (MD/TD)	DIN 53 363 3)

5.2 Fibre Fabric Material (Foot Covers, Belt, Braces and Waist Belt)

	Characteristics	Requirements	Testing Method
5.2.1	Weight per sqm (grams)	200 +/- 10%	Scale

- 1) Test specimen with 6 mm waist. Tensile velocity 500 mm/min.
- 2) Deformation velocity 200 mm/min.
- 3) Deformation velocity 100 mm/min.



7 MARKING

7.1 Unit Package

7.1.1 Every individual Unit Package (1 set of C/97-L-XL) is marked with a printed label with the following information:

- Nr of and Product Designation.... : 1 set of C-Cover Dress C/97-L(XL)
- Military Product Code.....: To be specified by the customer
- Lot Number Code System..... : To be agreed upon
- Delivery Date: Upon request
- Manufacturers Code..... : Given by the Customer
-and/or Manufacturers Name... : New Pac Safety AB + Logotype
 - Location : Bankeryd - Sweden
 - Fax Number..... : + 46 36 410 31

7.2 Box Package

7.2.1 Every individual Box Package (10 sets of C/97-L-XL each) is marked on both short sides with a 150 x 210 mm printed label with the following information:

- Number of Unit Packages..... : 10 sets
- Product Designation..... : Chemi Cover Dress C/97-L(XL)
- Military Product Code.....: To be specified by the customer
- Product Design.....: Symbolic sketch of the Product
- Lot Number Code System..... : To be agreed upon
- Delivery Date: Upon request
- Manufacturers Code.....: Given by the Customer
-and/or Manufacturers Name....: New Pac Safety AB + Logotype
 - Location.....: Bankeryd - Sweden
 - Tel.....: +46 36 411 39
 - Fax.....: +46 36 410 31

7.2.2 Every pallet load is marked with a rolling production number / lot.

7.3 Extra Marking

7.3.1 Additional marking on to the Product, the Unit Package or the Box Package may be offered upon request.

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8 RESTRICTIONS

8.1 Patent

8.1.1 The C-Cover Dress C/97-L-XL is a patented construction and must not be produced elsewhere without a New Pac Safety license.

8.2 Transportation and Storage instructions

8.2.1 Avoid high heat exposure of the C/97-L-XL as thermo plastic material may stick to itself or degrade. Recommended maximum temperature for short term storage is +65 °C.

8.2.2 Storage Life at -30° to +55° C = 10 years.

Storage Life at -30° to +45° C = 20 years.

8.3 Action Limitations

8.3.1 Extreme low temperatures as well as high temperatures reduce the film strength of the C/97-L-XL in action. Full reliability of the C/97-L-XL is guaranteed within the temperature range from -20° C to +65 °C.



9 QUALITY ASSURANCE

9.1 Suppliers Activity

9.1.1 New Pac Safety quality assurance routines and resources now meet the standards in SS-EN ISO 9001:2000.

9.2 References

9.2.1 New Pac Safety AB has many years' experiences in supplying the Swedish Defense Material Administration (FMV) in accordance with their quality assurance regulations.

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