

SWEDE

Personal Protective Equipment



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Background

The requirements for the Personal Protection Equipment have been specified by members from:

- National Board of Health and Welfare,
- National Rescue Services Board, Swedish Poisons Information Centre,
- National Defence Research Institute.

Aim

The equipment shall protect medical staff while decontaminating casualties in chemical accidents, chemical warfare, terrorist attacks, radioactive fallout etc.

Development

The equipment has been developed in co-operation with doctors, nurses and paramedics and ambulance personnel. Also, training at DEMC (Disaster and Emergency Medical Centre) and tests carried out by National Defence Research Institute, Department for NBC Protection, have been a major input to the development. Safety and comfort have been the main objective.

Function

The blower unit supplies the hood with filtered air. The airflow is constant at 140 l/min. This creates an overpressure in the hood and an extremely high level of protection. The blower unit is powered with standard batteries and gives under normal conditions a using time exceeding six hours. The warning system alerts the user if the airflow drops below 130 l/min, or if the voltage drops to less than 5,8 Volts. The overall is equipped with braces and elastic cuffs around the wrists and ankles. All seams are taped.

Range of use

The equipment is intended for use outside the risk zone. It shall protect the wearer from chemical agents that:

- .evaporates from the casualties, and/or
- .comes into the security area because of change in wind direction.



A complete set includes:

- 1 Decontamination Suit in size S-M or L-XXL.
- 1 Suspenders.
- 1 Protective Hood.
- 1 Blower Unit with carrying belt and flow meter.
- 1 Battery Holder.
- 6 Battery R 14.
- 1 par Robber Gloves.
- 1 par Cotton Gloves.
- 1 par Rubber Boots in size 36-47.
- 2 Filter 100, ABEKP3 Radiak.
- 1 Drinking function the hood, incl. connections.
- 1 High Visibility vest.
- 1 Kit of spare parts.
- 1 Instruction manual
- 1 Bag



Technical Description

Blowerunit

Minimum air flow:

Power source:

Operating time:

Weight

Warning system:

47-6200 EN 164

140 litres / min

Standard battery cells, 6 x 1,5V

> 6 hours

850gr excl. Batteries and filters.

Two signals and the unit is ready to operate

Short space between the signals = Low

voltage

Long space between the signals = Low airflow

Filter 100

Hood

Material:

Neck collar material:

Half mask:

Seams:

Tape:

Safety factor:

Size:

Weight:

Washing instructions:

72-1000 ABEKP3 Radiak

46-6010 EN 146

Butyl-coated polyester

Neoprene

Silicone

Double seam, taped

Butyl-tape.

30 000

One size fits all adults.

700 g.

Hand cleansing, soap solution.

Overall:

46-0002/5 EN 465

Material:

Polyurethane coated polyamide

Seams:

Taped

Elastic cuff and collar material:

Neoprene

Pockets:

2 chest pockets, 2 leg pockets, 1 for scissors and pen.

Sizes:

S-M, L-XXL

General:

Equipped with braces.

Bag:

Contains all the above (not boots)

Resistance Table / Penetration of chemicals

Chemicals		Penetration Time	Repellency inclination 45°
Ammonia Aqua 25%	NH ₃	>3 h	98,0%
Sulphuric Acid 30%	H ₂ SO ₄	>3 h	96,5%
Hydrochloric Acid 24%	HCl	3 h	99,2%
Sodium Hydroxide 40%	NaOH	>3 h	99,5%
Benzene	C ₆ H ₆	1 h	91,5%
Toluene	C ₆ H ₅ CH ₃	0,5 h	90,1%
Mustard Gas Liquid	S(CH ₂ CH ₂ Cl) ₂	0,5 h	-

Tests performed by:

FOA (National Defence Research Establishment)

IFP Research (Institute of Fibre and Polymer Technique)

TST (Textil Skyddsteknik AB)

SWEDISH EMERGENCY DISASTER EQUIPMENT

Henriksdalsvägen 2, SE-386 92 FÄRJESTADEN

Tel: +46 48 48480 Fax: +46 48 48490

E-mail: info@frenatus.com www.frenatus.com