

SWEDISH EMERGENCY DISASTER EQUIPMENT

PPE

Personal Protection Equipment

Tyvek F- Limited Life Decontamination Suit



The Total Solution



Normeca^{AS}

SUPPLIER OF MOBILE HOSPITALS

FOR NUCLEAR, BIOLOGICAL & CHEMICAL EMERGENCIES

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One Exceptional Design!

The SWEDE Butyl Decontamination Suit was specifically developed to meet the needs of the Emergency Medical First Responder to enable them to safely decontaminate casualties as a result of an incident involving the accidental or deliberate release of an industrial chemical or chemical warfare agents.

The suit specification was produced in Sweden by the ABC Chemical Incident Working Group. The group members represented the Swedish National Board of Health and Welfare, National Rescue Services Board, the Swedish Poisons Information Centre and the National Defence Research Institution.

The results of the development is a fully integrated, special for purpose, decontamination suit that provides Emergency First Responders with excellent protection, durability and comfort to complete their tasks safely and with confidence.



Comprising of:

- Respiratory Protection
- Body Coverall
- Hand Protection
- Foot Protection
- Accessories
- Purose built stowage container
- Filter water protection barrier

That provides:

- Filtered air supply at 140ltrs per minute flow rate
- Fully Intergrated components
- User Comfort
- Audiable warnings – Low power, Low air flow.
- Good vision
- Good dexterity
- Ability to wear own spectacles
- Excellent protection even with facial hair.
- A range of sizes to suit all – even children
- Protection against a wide range of chemicals



Respiratory Protection – Powered Air Purifying Respiratory (PAPR)

The PAPR complies with EN 12941 Respiratory protection devices – Powered filtering devices incorporating a helmet or a hood. The system consists of a protective hood, battery powered blower unit, air hose, battery box, a waist belt and 2 x A2B2K1 P3 combination filters. The complete system provides protection against a wide range of chemicals

The blower produces a filtered air flow of 140 ltrs per minute that creates a positive pressure within the hood providing excellent protection. The air flow is designed to keep the visor clear and increase operator comfort.

The hood is manufactured in one size that fits all. This means that the hood can be worn by people with facial hair and spectacles and as there are no straps involved there is no need for adjustment. The hood is simply pulled over the head and forms a complete tight seal around the neck.



Body, Hand and Foot Protection – Complete Intergration – No Tape required!

Total intergration between all elements of the protective system to ensure operator safety has been paramount in the SWEDE PPE design. A study of the operations and conditions the medical first responder has to face when dealing with a chemical casualty such as bending, lifting, washing and carrying were all taken into consideration by the ABC team when determining the PPE specification.

The coverall is supplied with intergrated feet and a triple glove hand protection. The inner cotton glove absorbs moisture, the second glove, the Northshield 4H glove provides the protection barrier and the outer Nitrile glove provides both protection and improved dexterity. The coverall is further enhanced with double skin legs and arms. This design enables water to run off rather than into the joints during decontamination operations. The coverall is also manufactured with neoprene neck and cuff seals that fully intergrates with the respiratory and hand protection providing a complete and safe seal between the two elements of the system. There is no call to tape up the design shortfalls with the SWEDE PPE.



Double skin leg design



Triple glove and neoprene cuff protection



Neoprene neck seal



Stowage bag



Range of Sizes



Filter protection cap

A complete set includes



- 1 Tyvek F Coverall, sizes S-M, L-XXL or XXXL
- 1 Protective Hood.
- 1 Blower Unit with carrying belt and flow meter.
- 1 Battery Holder.
- 6 Battery R 14.
- 1 pair Silver Shield 4H Gloves.
- 1 pair Nitrile Gloves.
- 1 pair Cotton Gloves.
- 2 Filter 100, ABEKP3 Radiak.
- 1 Instruction manual
- 1 Stowage Box

Optional Extra:

- 1 Cooling Vest
- 1 pair Rubber/Steel boots EN 345

Resistance Table / Penetration of chemicals

Chemicals		Penetration Time	Repellencyinclination 45°
Ammonia Aqua 25%	NH ₃	> 480 min	-
Sulphuric Acid 30%	H ₂ SO ₄	> 480 min	-
Toluene	C ₆ H ₅ CH ₃	> 480 min	-
Acetone	CH ₃ COCH ₃	> 480 min	-
Benzene	C ₆ H ₆	> 480 min	-
Acetonitrile	CH ₃ CN	> 480 min	-
1,3 Butadiene	CH ₂) ₂ (CH) ₂	> 480 min	-
Carbon Disulfide	CS ₂	> 480 min	-
Chlorine	Cl ₂ (gas)	> 480 min	-
Dichloromethane	CH ₂ Cl ₂	8 min	-
Diethylamine	C ₂ H ₅) ₂ NH	> 480 min	-
Dimethylformamide	HCON(CH ₃) ₂	> 480 min	-
Ethyl Acetate	CH ₃ COOCH ₂ CH ₃	> 480 min	-
Ethylene Oxide	H ₂ COCH ₂	120 min	-
n-Hexane	CH ₃ (CH ₂) ₄ CH ₃	> 480 min	-
Methanol	CH ₃ OH	> 480 min	-
Methyl Chloride	CH ₃ Cl	> 480 min	-
Nitrobenzene	C ₆ H ₅ NO ₂	> 480 min	-
Tetrachloroethylene	C ₂ Cl ₄	> 480 min	-
Tetrahydrofuran	CH ₂ (CH ₂) ₂ CH ₂ O	> 480 min	-
Mustard Gas Liquid	S(CH ₂ CH ₂ Cl) ₂	> 480 min	-

**Blower Unit**

EN Standard	EN 12941
Power source:	Standard battery cells, 6 x 1,5V
Operating time:	> 6 hours
Filter 100:	ABEK P3 Radiac
Weight:	850gr excl. Batteries and filters.
Warning system:	Two signals and the unit is ready to operate Short space between the signals = Low voltage Long space between the signals = Low airflow

Hood

Material:	Tyvek F
Neck collar material:	Neoprene
Half mask:	Silicone
Seams:	Taped
Safety factor:	2800
Size:	One size fits all adults.
Weight:	700 g.

Overall

Material:	Tyvek F
Seams:	Taped
Elastic cuff and collar material:	Neoprene
Sizes:	S-M, L-XXL, XXXL

Gloves

Inner:	Cotton, one size
Intermediate	Silver Shield 4H, one size
Outer:	Nitrile, sizes 8 - 10
Boots	Rubber/Steel sizes 36 - 47 (Optional Extra)
Stowage Box	Contains all equipment less boots
Dimensions:	60 x 30 x 33 cm. Weight 6,5 kg

