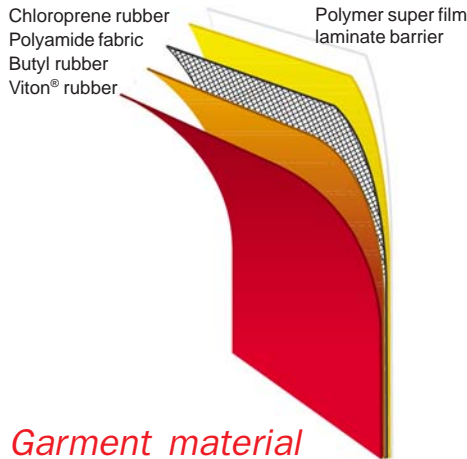


Product sheet - Trelchem® HPS type TE model VP1

Trelchem® HPS type TE model VP1 provides protection against hazardous chemicals in liquid, vapour, gaseous and/or solid form. Trelchem HPS type TE model VP1 is a totally encapsulating type of suit, certified to the American Standard NFPA 1991 edition 2000 as well as to the European standard EN 943.



Garment material

Strong and flexible polyamide fabric coated on the outside with butyl rubber and an additional top layer of Viton®. On the inside it is coated with chloroprene rubber and a polymer barrier laminate.

Seams

Butt seam stitched with an *aramide* thread. Covered on the outside with a Viton® rubber strip and on the inside with a welded-on barrier film laminate strip.

Footwear

Integrated socks/booties in the garment material (NFPA 1991 certified version). Also, a pair of silicone coated over-socks is supplied with the suit to ease the donning (=lower the friction) of the safety boots. Alternatively, the suit is supplied with fixed safety boots.



	XS	S	M	L	XL	XXL
Sock	41/7½	43/9	43/9	46/11	47/12	47/12
PVC-stövel	41/7½	41/7½	43/9	45/10	46/11	47/12
Nitril-stövel	41/7	41/7	43/9	45/10	46½/11½	46/11½

Gloves

The standard glove assembly consists of two layers. The inner glove (size 10), which is made of a silver coloured barrier film laminate, is fixed to the suit by a "snap-on" arrangement for easy replacement. The outer glove (size 11) is made of a special flame retardant chloroprene rubber. It is semi-attached to the suit by an elastic band. NFPA certified versions come with a cut-resistant Kevlar® over glove. A pair of separate thin inner comfort gloves of cotton is always supplied with the suit. Alternatively the suit can be delivered with semi-fixed attached Viton®/Butyl rubber gloves in combination with wrist cuffs for increased safety.



Visor

Extra large visor offering increased field of vision, especially downwards, made from impact resistant 2 mm PVC.

Zipper

Long heavy duty gas-tight zipper placed on the front left hand side of the suit for easy donning and doffing. The zipper is closing downwards to give the wearer the possibility to check the zipper position (closed/open) and to reach the zipper handle himself. Also, the zipper is protected by an external splash protective flap.



Ventilation

The suits are as standard equipped with an integrated possibility for ventilation. The flow rate can be adjusted by the wearer from the outside by a handle on the inlet regulating valve. Standard flow rate approx. 2 alt. 30 l/min (optional approx 30 alt. 100 l/min). The over pressure is automatically controlled by means of two membrane valves, which are protected by separate splash protections. Also, the suit is equipped with a reinforcement on the inside for optional installation of airline passthrough.



Standard size range

Option of XS, S, M, L, XL and XXL.

Size	Wearer's height (cm)
XS	164-176
S	170-182
M	176-188
L	182-194
XL	188-200
XXL	200-212

Accessories supplied with each suit

Each suit is delivered with 1 pair of separate cotton comfort inner gloves, 1 pair of separate outer special HPS/VPS chemical protective rubber gloves (alternatively with separate outer Viton®/butyl rubber gloves) incl 1 pair of elastic bands, 1 pair of Kevlar® over gloves (NFPA certified versions), 1 coat hanger type TE, 1 grease stick for lubrication of the zipper and 1 comprehensive manual with technical data. Each suit in sock version is delivered with 1 pair of separate comfort silicone over socks.

Standards

Trellchem® HPS type TE model VP1 (sock version) is tested by ITS (Intertek Testing Services NA Inc. Cortland, NY, USA) and certified by SEI (Safety Equipment Institute in Chicago, USA) according to the American standard NFPA 1991, including the optional requirement for chemical and biological terrorism protection. The Trellchem® HPS type TE model VP1 meets all the performance requirements including the flammability and abrasion resistance tests as mandated in the NFPA 1991, *without* any additional over garment. Trellchem® HPS type TE model VP1 is also tested and certified by the notified body FORCE-Dantest CERT in Denmark, in accordance with the European standard EN 943.

References

Trellchem® suits are in world-wide use by leading hazmat, rescue and fire fighting teams, armed forces, military defence, civil defence as well as in the industry.

PERMEATION TEST RESULT ACCORDING TO THE NFPA 1991 / ASTM F 739 (0,1 µg/cm²*min.)

Chemical	BT Time (min)	Chemical	BT Time (min)
Acetic anhydride	> 480	*Hydrogen chloride	> 480
*Acetone	> 480	Isoprene	> 480
*Acetonitrile	> 480	JP-4	> 480
Acetyl chloride	> 480	*Methanol	> 480
Acrylic acid	> 480	*Methyl Chloride	> 480
*Anhydrous ammonia	> 480	Methyl Isocyanate	> 480
Aniline	> 480	Methyl ethyl ketone	> 480
Bromine	360	Methyl metacrylate	> 480
*1,3-Butadiene	> 480	Monochlorobenzene	> 480
Butylamine	316	Nitric acid 70 %	> 480
*Carbon disulfide 95%	> 480	*Nitrobenzene	> 480
*Chlorine	> 480	Nitromethane	> 480
Chloroform	> 480	Oleum 30%	> 480
Chlorosulfonic acid	> 480	Phenol 85%	> 480
*Dichloromethane	> 480	Phosphoric acid 85 %	> 480
*Diethyl amine	> 480	Phosphorous trichloride	> 480
Diethyl ether	352	Pyridine	> 480
*Dimethyl formamide	> 480	*Sodium hydroxide 40%	> 480
Dimethyl hydrazine	> 480	Styrene	> 480
Dimethylsulfoxide	> 480	*Sulphuric acid 98%	> 480
Epichlorohydrine	> 480	*Tetrachloroethylene	> 480
*Ethyl acetate	> 480	*Tetrahydrofuran	> 480
Ethylene glycol	> 480	Thionyl chloride	> 480
*Ethylene oxide	> 480	*Toluene	> 480
Formaldehyde 37%	> 480	Tribromophenol	> 480
Formic acid 96%	> 480	Trichloroacetic acid	> 480
Furfural	> 480	Trichloroethylene	> 480
*Hexane	> 480	Triethylamine	> 480
Hydrazine	> 480	Triethylenetetramine	> 480
Hydrochloric acid 37 %	> 480	Vinyl acetate	> 480
Hydrofluoric acid 48 %	> 480	Vinyl chloride	> 480

* NFPA 1991 chemical test battery

BT=Breakthrough

Underlined chemicals=EN 943-2 chemical test battery