

# Product sheet - Trellchem® TLU

Trellchem® TLU provides protection against hazardous chemicals in liquid, vapour, gaseous and/or solid form. It is a so-called "limited use" type of suit in a totally encapsulating design. It is made of a unique material combining excellent chemical barrier with high strength. Trellchem® TLU is fully certified in accordance with the European standard EN 943 and is also available as a NFPA 1991 certified ensemble, TLU-A.

Barrier film laminate  
Polyamide fabric  
Barrier film laminate



## Garment material

Strong and flexible polyamide fabric laminated on each side with a barrier film laminate.

## Seams

Butt seam stitched with an *aramide* thread. Covered with a welded-on barrier film laminate strip.

## Footwear

Integrated socks/booties in the garment material. Also, a pair of oversocks is supplied with the suit to ease the donning (=lower the friction) of the safety boots.



## 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. TLU-A comes with a cut-resistant Kevlar® over glove. A pair of separate thin inner comfort gloves of cotton is always supplied with the suit.



## Visor

Wide vision visor in PVC, which is additionally protected with a highly chemical resistant film.

## 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.



## TLU-A

Trellchem® TLU is also available as a NFPA 1991 certified ensemble, TLU-A. As is the case with all other limited use and plastic laminate suits, an overcover is required to fulfil all requirements of NFPA 1991.



	XS	S	M	L	XL	XXL
Sock	41/7½	43/9	43/9	46/11	47/12	47/12

## 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 chloroprene rubber gloves incl 1 pair of elastic bands, 1 pair of over socks, 1 bag/cover (also to be used for safe disposal), 1 grease stick for lubrication of the zipper and 1 comprehensive manual with technical data.

## Standards

The Trellechem<sup>®</sup> TLU is tested and certified by the notified body SATRA in the UK, in accordance with the European standard EN 943. Trellechem<sup>®</sup> TLU-A is fully tested and certified in accordance with the American standard NFPA 1991 and approved by SEI (Safety Equipment Institute in Chicago, USA).

## References

Trellechem<sup>®</sup> 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 STANDARD 1991 / ASTM F 739 (0,1 µg/cm<sup>2</sup>\*min.)

Chemical	BT Time (min)	Chemical	BT Time (min)
Acetic anhydride	> 480	<u>*Hydrogen chloride</u>	> 480
<u>*Acetone</u>	> 480	Isoprene	> 480
<u>*Acetonitrile</u>	> 480	JP-4	> 480
Acetyl chloride	144	<u>*Methanol</u>	> 480
Acrylic acid	> 480	*Methyl Chloride	> 480
<u>*Anhydrous ammonia</u>	> 480	Methyl Isocyanate	432
Aniline	> 480	Methyl ethyl ketone	> 480
Bromine	< 15	Methyl metacrylate	> 480
*1,3-Butadiene	> 480	Monochlorobenzene	> 480
Butylamine	> 480	Nitric acid 70 %	> 480
<u>*Carbon disulfide 95%</u>	> 480	*Nitrobenzene	> 480
<u>*Chlorine</u>	> 480	Nitromethane	> 480
Chloroform	> 480	Oleum 30%	> 480
Chlorosulfonic acid	> 480	Phenol 85%	> 480
<u>*Dichloromethane</u>	> 480	Phosphoric acid 85 %	> 480
<u>*Diethyl amine</u>	> 480	Phosphorous trichloride	> 480
Diethyl ether	> 480	Pyridine	152
*Dimethyl formamide	> 480	<u>*Sodium hydroxide 40%</u>	> 480
Dimethyl hydrazine	380	Styrene	> 480
Dimethylsulfoxide	> 480	<u>*Sulphuric acid 98%</u>	> 480
Epichlorohydrine	> 480	*Tetrachloroethylene	> 480
<u>*Ethyl acetate</u>	> 480	<u>*Tetrahydrofuran</u>	> 480
Ethylene glycol	> 480	<u>*Toluene</u>	> 480
*Ethylene oxide	> 480	Tribromophenol	> 480
Formaldehyde 37%	> 480	Trichloroacetic acid	> 480
Formic acid 96%	> 480	Trichloroethylene	> 480
Furfural	> 480	Triethylamine	> 480
<u>*Hexane</u>	> 480	Triethylenetetramine	> 480
Hydrazine	> 480	Vinyl acetate	> 480
Hydrochloric acid 37 %	> 480	Vinyl chloride	> 480
Hydrofluoric acid 48 %	60		

\* NFPA 1991 chemical test battery

BT=Breakthrough

Underlined chemicals=EN 943-2 chemical test battery



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