

GLS 300C

CHEMPROTEX™ 300



RESPIREX™

Petrochemical
Industry

Incident
Response

Hazmat
Handling

CBRN
Protection

Civil Defence

The GLS 300C suit in Chemprotex™ 300 is a single use air-fed gas-tight chemical protection suit for use with breathable air supplied from an external compressed air source providing positive pressure.

The suit combines the benefits of a lightweight high-performance chemical barrier fabric with a gas-tight construction to method 2 of ISO 17491-1. It incorporates permanently attached antistatic chemical gloves, sock feet and a lightweight gas-tight zip.

- Gas-tight construction with every suit tested to ISO 17491-1:2012 Method 2, the same pressure test used for EN943-2 gas-tight suits.
- Single use suit, ensuring that there is no risk from cross contamination or from suits that have not been fully decontaminated. No costs for laundering, repairs or testing.
- Designed to prevent the build up of electrostatic charge and tested by DEKRA according to the ATEX guidelines for use in potentially explosive atmospheres
- Compatible with the PermaSure™ Toxicity Modeller for Chemprotex™ materials that can calculate the safe working time for over 4,000 different chemicals based on real world operating conditions.
- Semi-rigid laminated visor
- Lightweight gas-tight zip fitted across the chest covered by double external storm flaps with hook and loop fastener
- Chemically protective anti-static glove attached to the suit material
- Integral socks in Chemprotex™ 300 material with splash-guard outer legs allowing the wearing of customer's own boots. (Boots not included)
- Must be worn with ESD footwear to ensure a conductive path to ground [when used in potentially explosive atmospheres]
- The air distribution system in the hood and air permeable collar provide cooling air through the suit, making the wearer more comfortable and better able to focus on tasks
- For use with Bartels & Rieger two piece air control valve (ref. RVD039W), supplied separately
- The hood design provides high protection without the need for a tight-fitting face piece, which means:
 - Many wearers feel less constricted
 - Can be used by wearers with facial hair or glasses
 - Training needs are reduced
 - Face-fit testing is not required



TESTING & CERTIFICATION:

TYPE 3, EN14605:2005+A1 2009
Liquid-Tight Chemical Protective Clothing

TYPE 4, EN14605:2005+A1 2009
Spray-Tight Chemical Protective Clothing

TYPE 5, EN13982-1:2004+A1:2010
Particulate Protective Clothing

TYPE 6, EN13034:2005+A1 2009
Limited Spray-Tight Chemical Protective Clothing

METHOD 2, ISO 17491-1:2012
Internal pressure test

ATEX TESTED FOR USE IN EXPLOSIVE ENVIRONMENTS:

Dust Ex atmospheres: **ZONES 20, 21 & 22**

Gas Ex atmospheres: **ZONES 1 & 2**

Tested in accordance with EN IEC 60079-32-2: (2015) and CEN/CLC/TR 16832:2015

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CHEMICAL WARFARE AGENT PROTECTION

The Chemprotex™ 300 & 400 materials have been tested for resistance to permeation by chemical warfare agents in accordance with FINABEL O.7.C methods at the respected TNO laboratories. Both the material and seams were found to offer an extremely high level of protection against the following agents:

Table 1: Material samples

Agent	Breakthrough time (hours)	Temperature (°C)
Mustard agent (HD)	>48	37
Sarin (GB)	>48	37
Soman (GD)	>48	37
VX	>48	37

Table 2: Seam samples

Agent	Breakthrough time (hours)	Temperature (°C)
Mustard agent (HD)	>48	37
Sarin (GB)	>48	37
Soman (GD)	>48	37
VX	>48	37

RESISTANCE TO PENETRATION BY INFECTIVE AGENTS

Chemprotex™ 300 & 400 have passed the requirements of EN14126:2003 for protective clothing against infective agents. It is therefore suitable to provide protection against blood, blood-borne pathogens, body fluids, biologically contaminated aerosols and both wet and dry microbial penetration.

Tested According To	Requirement	Level of Performance	EN14126:2003 Class
ISO 22610:2006	Resistance to wet microbial penetration	> 75 min	6
ISO 16603:2004	Resistance to penetration by blood and body fluids using synthetic blood	Pass	N/A
ISO 16604:2004	Resistance to penetration by blood-borne pathogens using bacteriophage Phi-X174	20 kPa	6
ISO/DIS 22611:2003	Resistance to penetration by biologically contaminated aerosols	> 5 (Log R)	3
ISO 22612:2005	Resistance to dry microbial penetration	<1 (Log ₁₀ CFU)	3

PHYSICAL PROPERTIES

Property	Test Method	Typical Level of Performance	EN14325:2004 Class
Abrasion resistance	EN 530:2010 Method 2 (inc. pressure drop)	2,000 Cycles	4
Flex cracking resistance	EN ISO 7854:1997 Method B (inc. pressure drop)	1,000 cycles	1
Flex cracking resistance at low temperatures (-30°C)	EN ISO 7854:1997 Method B at -30°C (inc. pressure drop)	N/A	N/A
Trapezoidal tear resistance	EN ISO 9073-4:1997	Machine Direction: 116 N Cross Direction: 83 N	3
Puncture resistance	EN 863:1995	12 N	2
Tensile Strength	EN ISO 13934-1:1999	Machine Direction: 180 N Cross Direction: 133 N	4
Resistance to flame*	EN 13274-4:2001 Method 3 modified (inc. pressure drop)	No part ignited or continued to burn on removal from the flame*	Pass
Seam strength	EN ISO 13935-2:1999	166.8 N	5
Resistance to blocking	EN 25978:1993	Slight blocking	-
Surface resistance	EN 1149-1:2006	Face: <3.6x10 ⁸ Ω Reverse: <3.4x10 ⁷ Ω	-

* Chemprotex™ 300 meets the resistance to ignition requirements of EN14325:2004 but is not flame resistant. PPE manufactured from Chemprotex™ 300 should not be worn in potentially flammable environments.

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CHEMICAL PERMEATION

CHEMICAL NAME	STATE	CAS NUMBER	EN374-3 (MIN.)	EN CLASS
ACETALDEHYDE	L	75-07-0	>480	6
ACETIC ACID (30%)	L	64-19-7	>480	6
ACETIC ACID (GLACIAL)	L	64-19-7	>480	6
ACETIC ANHYDRIDE	L	108-24-7	>480	6
ACETONE	L	67-64-1	>480	6
ACETONITRILE	L	64047	>480	6
ACETOPHENONE	L	98-86-2	>480	6
ACRYLAMIDE (50%)	L	65532	>480	6
ACRYLIC ACID	L	65660	>480	6
ACRYLONITRILE	L	107-13-1	>480	6
ALLYL ALCOHOL	L	107-18-6	>480	6
AMMONIA	G	7664-41-7	>480	6
AMMONIUM HYDROXIDE (35% NH3 IN WATER)	L	1336-21-6	>480	6
AMYL ACETATE-N	L	628-63-7	>480	6
ANILINE	L	62-53-3	>480	6
AVIATION FUEL	L	-	>480	6
BENZENE	L	71-43-2	58	2
BENZONITRILE	L	100-47-0	>480	6
BENZOYL CHLORIDE	L	98-88-4	>480	6
BENZYL ALCOHOL	L	100-51-6	>480	6
BENZYL CHLORIDE	L	100-44-7	>480	6
BROMINE	L	7726-95-6	8	0
BUTADIENE 1,3	G	106-99-0	>480	6
BUTANE	G	106-97-8	>480	6
BUTANOL N-	L	71-36-3	>480	6
BUTYL ALDEHYDE	L	123-72-8	>480	6
BUTYL ETHER N-	L	142-96-1	>480	6
CARBON DISULPHIDE	L	75-15-0	>480	6
CHLORINE	G	7782-50-5	>480	6
CHLOROACETIC ACID (68%)	L	65692	>480	6
CHLOROBENZENE	L	108-90-7	291	5
CHLOROETHANOL 2-	L	107-07-3	>480	6
CHLOROFORM	L	67-66-3	9	0
CRESOL M-	L	108-39-4	>480	6
CYCLOHEXANE	L	110-82-7	>480	6
CYCLOHEXANONE	L	108-94-1	>480	6
DICHLORODIMETHYLSILANE	L	75-78-5	>480	6
DICHLOROMETHANE	L	64164	>480	6
DIESEL FUEL	L	-	>480	6
DIETHYLAMINE	L	109-89-7	11	1
DI(2-ETHYLHEXYL) PHTHALATE	L	117-81-7	>480	6
DIMETHYLACETAMIDE N,N	L	127-19-5	>480	6
DIMETHYLFORMAMIDE N,N	L	61699	>480	6
DIMETHYL SULPHATE	L	77-78-1	>480	6
DIMETHYL SULPHIDE	L	75-18-3	29	1
DIMETHYL SULPHOXIDE	L	67-68-5	>480	6
DIOXANE 1,4-	L	123-91-1	>480	6
EPICHLOROHYDRIN	L	106-89-8	>480	6
ETHANOL	L	64-17-5	>480	6
ETHANOLAMINE	L	141-43-5	>480	6
ETHYL ACETATE	L	141-78-6	>480	6
ETHYL CELLOSOLVE ACETATE	L	111-15-9	>480	6
ETHYLENE DIAMINE	L	107-15-3	>480	6
ETHYLENE DIBROMIDE	L	106-93-4	>480	6
ETHYLENE GLYCOL	L	107-21-1	>480	6
ETHYLENE OXIDE	G	75-21-8	>480	6
FORMALDEHYDE (37%)	L	50-00-0	>480	6
FORMIC ACID (96%)	L	64-18-6	>480	6
FURALDEHYDE 2-	L	72321	>480	6
GLUTARALDEHYDE (5%)	L	111-30-8	>480	6
HEPTANE	L	142-82-5	>480	6
HEXANE	L	110-54-3	>480	6

CHEMICAL NAME	STATE	CAS NUMBER	EN374-3 (MIN.)	EN CLASS
HYDRAZINE MONOHYDRATE	L	7803-57-8	>480	6
HYDROCHLORIC ACID (37%)	L	7647-01-0	>480	6
HYDROFLUORIC ACID (48%)	L	7664-39-3	>480	6
HYDROFLUORIC ACID (73%)	L	7664-39-3	>480	6
HYDROGEN CHLORIDE	G	7647-01-0	>480	6
HYDROGEN FLUORIDE (ANHYDROUS GAS)	G	7664-39-3	304	5
HYDROGEN FLUORIDE (ANHYDROUS LIQUID)	L	7664-39-3	228	4
HYDROGEN PEROXIDE (30%)	L	7722-84-1	>480	6
KEROSENE	L	8008-20-8	>480	6
MERCURIC CHLORIDE (SAT. SOLUTION)	L	7487-94-7	>480	6
METHACRYLIC ACID	L	79-41-4	>480	6
METHANOL	L	67-56-1	>480	6
METHYL ACRYLATE	L	96-33-3	>480	6
METHYL-T-BUTYL-ETHER	L	1634-04-4	>480	6
METHYL CHLORIDE	G	74-87-3	>480	6
METHYL ETHYL KETONE	L	78-93-3	>480	6
METHYL MERCAPTAN	G	74-93-1	>480	6
METHYL METHACRYLATE	L	80-62-6	>480	6
METHYL VINYL KETONE	L	78-94-4	>480	6
METHYL -2-PYRROLIDONE N-	L	872-50-4	>480	6
METHYLENE BROMIDE	L	74-95-3	>480	6
NICOTINE	L	56558	>480	6
NITRIC ACID (70%)	L	7697-37-2	>480	6
NITRIC ACID (>90% FUMING)	L	7697-37-2	>480	6
NITROBENZENE	L	98-95-3	>480	6
NITROMETHANE (96%)	L	75-52-5	>480	6
OLEUM (15% FREE SO3)	L	8014-95-7	>480	6
PERCHLORIC ACID	L	7601-90-3	>480	6
PETROL, LEADED	L	-	>480	6
PETROL, UNLEADED	L	8006-61-9	>480	6
PHENOL (85%)	L	108-95-2	>480	6
PHOSPHORIC ACID (85%)	L	7664-38-2	>480	6
PHOSPHORUS OXYTRICHLORIDE	L	10025-87-3	440	5
POTASSIUM CHROMATE (SAT. SOLUTION)	L	7789-00-6	>480	6
PROPAN-2-OL	L	67-63-0	>480	6
PROPYLENE OXIDE 1,2-	L	75-56-9	>480	6
PYRIDINE	L	110-86-1	>480	6
'ROUNDUP' WEEDKILLER	L	-	>480	6
SODIUM CYANIDE (45%)	L	143-33-9	>480	6
SODIUM HYDROXIDE (40%)	L	1310-73-2	>480	6
SODIUM HYPOCHLORITE (12% CHLORINE)	L	7681-52-9	>480	6
STYRENE	L	100-42-5	>480	6
SULPHUR DIOXIDE	G	2025884	>480	6
SULPHURIC ACID (50%)	L	7664-93-9	>480	6
SULPHURIC ACID (95-98%)	L	7664-93-9	>480	6
TETRACHLOROETHYLENE	L	127-18-4	>480	6
TETRAHYDROFURAN	L	109-99-9	41	2
TOLUENE	L	108-88-3	173	4
TOLUENE 2,4-DIISOCYANATE	L	584-84-9	>480	6
TOLUIDINE O-	L	95-53-4	>480	6
TRICHLOROACETIC ACID (80%)	L	64353	>480	6
TRICHLOROETHYLENE 1,2,4-	L	120-82-1	>480	6
TRICHLOROETHYLENE	L	65386	21	1
TRIFLUOROACETIC ACID	L	64406	>480	6
TRIETHYLAMINE	L	121-44-8	168	4
VINYL ACETATE	L	108-05-4	>480	6
XYLENE (ISO-MIX)	L	1330-20-7	>480	6