Technical data sheet

DuPont™ Tyvek® IsoClean® , *Model IC 458 B WH MS*

CAT I Option MS SAL

Product Description

DuPont™ Tyvek® IsoClean® boot cover, model IC 458 B WH MS. Tunnelled elastication at shin. Ties. Elasticated ankle. Gripper™ sole. Bound internal seams. Clean-processed and gamma-sterilized. Aseptically folded. White.

Certifications

- PPE Category I

Packaging

Quantity/Box: 100 per box, individually packed in pairs. Subgrouped by 20 in an outer bag. 2 polyethylene liners. Cardboard box.

Size	Article Number	Mens Shoe US	Womens Shoe US	Mens Shoe EU	Mens Shoe UK	Length	Wrist	Upper Arm	Additional info
SM	D15466072	5	6.5	37	4.5				
MD	D15466083	7	8.5	39.5	6.5				
LG	D15466090	14	15.5	48.5	13.5				
XL	D15466105	19	21	53	18.5				

Reference Number: IC 458 B WH MS

Physical Properties

Property	Test Method	Result	EN Class
Colour	N/A	White	N/A
Basis Weight	DIN EN ISO 536	45 g/m^2	N/A
Thickness	DIN EN ISO 534	185 µm	N/A
Abrasion Resistance [7]	EN 530 Method 2	>10 cycles	1 of 6 [1]
Flex Cracking Resistance [7]	EN ISO 7854 Method B	>100000 cycles	6 of 6 [1]
Trapezoidal Tear Resistance (MD)	EN ISO 9073-4	>10 N	1 of 6 [1]
Trapezoidal Tear Resistance (XD)	EN ISO 9073-4	>10 N	1 of 6 [1]
Tensile Strength (XD)	DIN EN ISO 13934-1	>30 N	1 of 6 [1]
Tensile Strength (XD)	DIN EN ISO 13934-1	>30 N	1 of 6 [1]
Puncture Resistance	EN 863	>5 N	1 of 6 [1]
Resistance to Water Penetration	DIN EN 20811	7 kPa	N/A
Surface Resistance at RH 25%, inside [7]	EN 1149-1	2^{10} Ohm	N/A
Exposure to high Temperature	N/A	Melting point ~135 °C	N/A
Resistance to Ignition [7]	EN 13274-4 Method 3	Pass	N/A
Bacterial Filtration Efficiency (3 µm)	EN 14683, Annex B	98.4 % ± 0.9 % STD DEV	N/A

1 According to EN 14325 **2** According to EN 14126 **3** According to EN 1073-2 **4** According to EN 14116 **12** According to EN 11612 **5** Front Tyvek ® / Back **6** Based on test according to ASTM D-572 **7** See Instructions for Use for further information, limitations and warnings **>** Larger than **<** Smaller than **N/A** Not Applicable **STD DEV** Standard Deviation

Comfort

Property	Test Method	Result	EN Class
Air Permeability (Gurley method)	ISO 5636-5	Yes	N/A
Air Permeability (Gurley method)	ISO 5636-5	4 s	N/A
Water Vapour Resistance, Ret	EN 31092/ISO 11092	6,8 m^2*Pa/W	N/A
Thermal Resistance, Rct	EN 31092/ISO 11092	$10*10^{-3}$ m^2*K/W	N/A
Thermal Resistance, clo value	EN 31092/ISO 11092	0,065 clo	N/A

2 According to EN 14126 **5** Front Tyvek ® / Back **>** Larger than **<** Smaller than **N/A** Not Applicable

Penetration and Repellency

Property	Test Method	Result	EN Class
Resistance to Penetration by Liquids, Sulphuric Acid (30%)	EN ISO 6530	<1 %	3 of 3 [1]
Resistance to Penetration by Liquids, Sodium Hydroxide (10%)	EN ISO 6530	<5 %	2 of 3 [1]
Repellency to Liquids, Sulphuric Acid (30%)	EN ISO 6530	>95 %	3 of 3 [1]
Repellency to Liquids, Sodium Hydroxide (10%)	EN ISO 6530	>90 %	2 of 3 [1]

1 According to EN 14325 **>** Larger than **<** Smaller than

Biological Barrier

Property	Test Method	Result	EN Class
Resistance to Penetration by Blood and Body Fluids using Synthetic Blood	ISO 16603	Pass	3 of 6 [2]
Resistance to Penetration by Blood-borne Pathogens using Bacteriophage Phi-X174	ISO 16604 Procedure D	No classification	No classification [2]
Resistance to Penetration by Contaminated Liquids	EN ISO 22610	Pass	1 of 6 [2]
Resistance to Penetration by Biologically Contaminated Aerosols	ISO/DIS 22611	Pass	1 of 3 [2]
Resistance to Penetration by Contaminated Solid Particles	ISO 22612	Pass	1 of 3 [2]

2 According to EN 14126 **>** Larger than **<** Smaller than

Permeation Data

Hazard Name	Physical State	CAS	BT Act mins	BT 0.1 mins	BT 1.0 mins	EN	SSPR g/cm²/min	MDPR g/cm²/min	Cum 480 g/cm²	Time 150 mins	ISO
Carmustine (3.3 mg/ml, 10 % Ethanol)	Liquid	154-93-8	1*	5*	>240	5	0.11	<0.01			
Cyclophosphamide (20 mg/ml)	Liquid	50-18-0	>240	>240	>240	5	<0.008	0.008			
Doxorubicin HCl (2 mg/ml)	Liquid	25136-40-9	145*	>240	>240	5	<0.064	0.009			
Etoposide (Toposar®, Teva) (20 mg/ml, 33.2 % (v/v) Ethanol)	Liquid	33419-42-0	>240	>240	>240	5	<0.01	<0.01			
Fluorouracil, 5- (50 mg/ml)	Liquid	51-21-8	>240	>240	>240	5	<0.01	<0.01			
Paclitaxel (Hospira) (6 mg/ml, 49.7 % (v/v) Ethanol)	Liquid	33069-62-4	>240	>240	>240	5	<0.01	<0.01			
Thiotepa (10 mg/ml)	Liquid	52-24-4	58	67	>240	5	0.02	<0.01			

BT Act (Actual) Breakthrough time at MDPR **BT 0.1** Normalized breakthrough time at 0.1 µg/cm²/min **BT 1.0** Normalized breakthrough time at 1.0 µg/cm²/min **EN** Classification according to EN 14325 **SSPR** Steady state permeation rate **MDPR** Minimum detectable permeation rate **CUM 480** Cumulative permeation mass after 480 mins **Time 150** Time to reach cumulative permeation mass of 150 µg/cm² **ISO** Classification according to ISO 16602 **CAS** Chemical abstracts service registry number **mins** Minutes **>** Larger than **<** Smaller than **imm** Immediate (< 4 min) **nm** Not tested **sat** Saturated solution **N/A** Not Applicable ***** Based on lowest single value **8** Actual breakthrough time; normalized breakthrough time is not available **na** Not attained

Important Note

The permeation data published have been generated for DuPont by independent accredited testing laboratories according to the test method applicable at that time (EN369, ASTM F739, EN 374-3, EN ISO 6529 (method A and B) or ASTM D6978)
The data is typically the average of three fabrics samples tested.
All chemicals have been tested at an assay of greater than 95 (w/w) % unless otherwise stated.
The tests were performed at room temperature and environmental pressure unless otherwise stated.
A different temperature may have significant influence on the breakthrough time.
Permeation typically increases with temperature.

Cumulative permeation data have been measured or have been calculated based on steady state permeation rate.
Cytostatic drugs testing has been performed at a test temperature of 27°C according to ASTM D6978 or ISO 6529 with the additional requirement of reporting a normalized breakthrough time at 0.01 µg/cm²/min.
Chemical warfare agents (Lewisite, Sarin, Soman, Mustard, Tabun and VX Nerve Agent) have been tested according to MIL-STD-282 at 22°C or according to FINABEL 0.7 at 37°C.
Permeation data for Tyvek® is applicable to white Tyvek® L1431N only and is not applicable for other Tyvek® styles or colours.
Permeation data are usually measured for single chemicals. The permeation characteristics of mixtures can often deviate considerably from the behaviour of the individual chemicals.

Please use the permeation data provided as a part of the risk assessment to assist with the selection of a protective fabric, garment or accessory suitable for your application. Breakthrough time is not the same as safe wear time. Breakthrough times are indicative of the barrier performance, but results can vary between the test methods and laboratories. Breakthrough time alone is insufficient to determine how long a garment may be worn once the garment has been contaminated. Safe user wear time may be longer or shorter than the breakthrough time depending on the permeation behaviour of the substance, the toxicity of the substance, working conditions and the exposure conditions (e.g. temperature, pressure, concentration, physical state).

Latest Update Permeation Data: 03/03/2017

For further product information, literature and as well as assistance in locating a local supplier, please visit:

www.safespec.dupont.co.uk

DuPont Personal Protection
DuPont de Nemours (Luxembourg) S.àr.l.
L-2984 Luxembourg
Tel.: +800 3666 6666 (international toll-free)
Fax: +352 3666 5071
E-mail: personal.protection@lux.dupont.com

The footnotes can be found on the SafeSPEC™ website.

Technical_Description_101080_EN.pdf Printed on : June 14, 2017

The miracles of science™