TYCHF7SWH00

Tyvek® 500 Labo

DuPont™ Tyvek® 500 Labo. Hooded coverall and attached slip-retardant overshoes. Stitched internal seams. Tunnelled elastication at wrists, ankles and face. Elasticated waist (glued-in). Tyvek® zipper and flap. White.

Name	Description
Full Part Number	TYCHF7SWH00
Fabric/Materials	TYVEK®
Design	Hooded coverall with attached slip-retardant overshoes and elastics
Seam	Stitched (internal)
Color	White
Sizes	SM, MD, LG, XL, 2X, 3X
Quantity/Box	25 per box, individually packed.

FEATURES & PRODUCT DETAILS

DuPont™ Tyvek® 500 Labo. Hooded coverall with attached, slip-retardant overshoes. Available in white in sizes SM to 3X. Robust yet lightweight (<250g per garment). 3-piece hood and gusset for improved fit. Elasticated face, wrists and ankles as well as glued-in waist elastic.
Tyvek® garments are composed of flash spun high density polyethylene, providing an ideal balance of protection, durability and comfort. Tyvek® is permeable to both air and water vapour, yet repels water-based liquids and aerosols. It offers an excellent barrier against fine particles and fibres (down to 1 micron in size), is ultra-low-linting and antistatically treated. Silicon non-added. Applications include the pharmaceutical industry, laboratories, cosmetics, optical and electronics.

- Certified according to Regulation (EU) 2016/425
- Chemical protective clothing, Category III, Type 5 and 6.
- EN 1073-2 (protection against radioactive contamination)
- Antistatic treatment (EN 1149-5) - on both sides.
- Stitched internal seams to help reduce contamination from the inside to the outside of the garment
- Attached overshoes consisting of garment material with friction-coated sole to provide added slip-resistance
- Suitable for use in GMP class C/D (ISO Class 6-9) clean rooms

ADDITIONAL EQUIPMENT NEEDED

- Please read, understand and follow the Instructions For Use
- Wear other appropriate PPE such as, but not limited to, respiratory, eye, head, hand, and foot protection based on the hazard assessment.

SIZES

Product Size	Article Number	Additional info
SM	D14529838	
MD	D14529842	
LG	D14529854	
XL	D14529869	
2X	D14529877	
3X	D14529880	

Physical Properties



Data relating to mechanical performance of the fabrics used in DuPont chemical protective clothing, listed for the selected garment according to the test methods and relevant European standard, if applicable. Such properties, including abrasion and flex-cracking resistance, tensile strength and puncture resistance can help in the assessment of protective performance.

Property	Test Method	Typical Result	EN
Abrasion Resistance [7]	EN 530 Method 2	>100 cycles	2/6 [1]
Basis Weight	DIN EN ISO 536	41.5 g/m^2	N/A
Colour.	N/A (598)	White	N/A
Exposure to high Temperature	N/A (598)	Melting point ~135 °C	N/A
Flex Cracking Resistance [7]	EN ISO 7854 Method B	>100000 cycles	6/6 [1]
Puncture Resistance	EN 863	>10 N	2/6 [1]
Resistance to water penetration	AATCC 127	>10 kPa	N/A
Surface Resistance at RH 25%, inside [7]	EN 1149-1	< 2,5 • 10^9 Ohm	N/A
Surface Resistance at RH 25%, outside [7]	EN 1149-1	< 2,5 • 10^9 Ohm	N/A
Tensile Strength (MD)	DIN EN ISO 13934-1	>30 N	1/6 [1]
Tensile Strength (XD)	DIN EN ISO 13934-1	>30 N	1/6 [1]
Trapezoidal Tear Resistance (MD)	EN ISO 9073-4	>10 N	1/6 [1]
Trapezoidal Tear Resistance (XD)	EN ISO 9073-4	>10 N	1/6 [1]

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

GARMENT PERFORMANCE



Information relating to the protective performance of a garment according to European standards where applicable. Includes important characteristics such as protection against radioactive contamination, seam strength and shelf life. Inward leakage and resistance to penetration by liquids, according to the relevant Type classification, are also detailed.

Property	Test Method	Typical Result	EN
Nominal protection factor [7]	EN 1073-2	>50	2/3 [3]
Seam Strength	EN ISO 13935-2	>75 N	3/6 [1]
Shelf Life [7]	N/A (598)	10 years [6]	N/A
Type 5: Inward Leakage [11]	EN ISO 13982-2	1.5 %	N/A
Type 5: Inward Leakage of Airborne Solid Particulates	EN ISO 13982-2	Pass	N/A
Type 6: Resistance to Penetration by Liquids (Low Level Spray Test)	EN ISO 17491-4, Method A	Pass	N/A

1 According to EN 14325 3 According to EN 1073-2 12 According to EN 11612 13 According to EN 11611 5 Front Tyvek ® / Back 6 Based on test according to ASTM D-572 7 See Instructions for Use for further information, limitations and warnings 11 Based on the average of 10 suits, 3 activities, 3 probes > Larger than < Smaller than N/A Not Applicable * Based on lowest single value

COMFORT



The comfort of a protective garment during use is largely determined by its weight, its permeability to vapour and air (breathability) and insulating properties. Data on these attributes is provided according to test method and, as with other data, can be compared by garment.

Property	Test Method	Typical Result	EN
Air Permeability (Gurley method)	TAPPI T460	< 45 s	N/A

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

PENETRATION AND REPELLENCY



A specific test method, EN ISO 6530, is used to measure the indexes of penetration, absorption and repellency of protective clothing material exposed to liquid chemicals. Results listed here reflect the penetration resistance and repellency of DuPont fabrics to 30% sulphuric acid and 10% sodium hydroxide.

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

1 According to EN 14325 > Larger than < Smaller than

BIOLOGICAL BARRIER



Detailed information on the protective performance (resistance to penetration) of DuPont clothing when exposed to biologically contaminated aerosols, liquids and dusts as well as blood, body fluids and blood-borne pathogens. Sorted by relevant European standard.

Property	Test Method	Typical Result	EN
Resistance to Penetration by Biologically Contaminated Aerosols	ISO/DIS 22611	Pass	1/3 [2]
Resistance to Penetration by Blood and Body Fluids using Synthetic Blood	ISO 16603	3,5 kPa	3/6 [2]
Resistance to Penetration by Blood-borne Pathogens using Bacteriophage Phi-X174	ISO 16604	Pass	2/6 [2]
Resistance to Penetration by Contaminated Liquids	EN ISO 22610	≤ 15 min	1/6 [2]
Resistance to Penetration by Contaminated Solid Particles	ISO 22612	Pass	1/3 [2]

2 According to EN 14126 > Larger than < Smaller than

WARNING

- Please take this into account for your risk-assessment that the sole is stitched; therefore the overshoe/overboot is not liquid-tight.
- The garment does not protect against ionizing radiation.
- The information provided herein corresponds to our knowledge on the subject at the date of its publication. This information may be subject to revision as new knowledge and experience becomes available. The data provided fall within the normal range of product properties and relate only to the specific material designated; these data may not be valid for such material used in combination with any other materials or additives or in any process, unless expressly indicated otherwise. The data provided should not be used to establish specification limits or used alone as the basis of design; they are not intended to substitute for any testing you may need to conduct to determine for yourself the suitability of a specific material for your particular purposes. Since DuPont cannot anticipate all variations in actual end-use conditions DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent rights.
- This garment and/or fabric are not flame resistant and should not be used around heat, open flame, sparks or in potentially flammable environments.
- Working in Ex-Zones: Please take this into account for your risk-assessment that the attached socks may isolate the wearer. There is the possibility that the garment and wearer cannot by grounded via the shoes and other measures for grounding the garment and the wearer are required

PERMEATION DATA



Permeation is the process by which a solid, liquid or gaseouses chemical moves through a protective clothing fabric at a molecular level. Permeation data assist in the selection of the most appropriate protective garment for a particular application and in the estimation of how long it can be safely worn. Standardised test methods are used to determine the resistance of DuPont materials to permeation, the results of which can be selected according to a specific chemical, chemical class or fabric.

Hazard / Chemical Name	Physical State	CAS	BT Act	BT 0.1	BT 1.0	EN	SSPR	MDPR	Cum 480	Time 150	ISO
Acetic acid (30%)	Liquid	64-19-7	imm	imm	imm		13.5	0.001			
Ammonium hydroxide (16%)	Liquid	1336-21-6	imm	imm	imm		20.3	0.005			
Ammonium hydroxide (28% - 30%)	Liquid	1336-21-6	imm	imm	imm		16.7	0.014			
Carboplatin (10 mg/ml)	Liquid	41575-94-4	>240	>240	>240	5	<0.001	0.001			
Carmustine (3.3 mg/ml, 10 % Ethanol)	Liquid	154-93-8	imm	imm	>240	5	<0.3	0.001			
Caustic ammonia (16%)	Liquid	1336-21-6	imm	imm	imm		20.3	0.005			
Caustic ammonia (28% - 30%)	Liquid	1336-21-6	imm	imm	imm		16.7	0.014			
Caustic soda (10%)	Liquid	1310-73-2	>240	>480	>480	6	<0.005	0.005			
Caustic soda (40%)	Liquid	1310-73-2	imm	>30	>240	5	<0.005	0.005			
Caustic soda (50%)	Liquid	1310-73-2	imm	>30	>240	5	0.85	0.01			
Caustic soda (>95%, solid)	Solid	1310-73-2	>480	>480	>480	6	<0.01	0.01			
Cisplatin (1 mg/ml)	Liquid	15663-27-1	>240	>240	>240	5	<0.0002	0.0002			
Cyclo phosphamide (20 mg/ml)	Liquid	50-18-0	>240	>240	>240	5	<0.002	0.002			
Dimethyl sulfate	Liquid	77-78-1	imm	imm	imm		>160	0.02			
Doxorubicin HCl (2 mg/ml)	Liquid	25136-40-9	>240	>240	>240	5	<0.003	0.003			
Ethane 1,2-diol	Liquid	107-21-1	imm	imm	imm		6.6	0.002			
Ethylene glycol	Liquid	107-21-1	imm	imm	imm		6.6	0.002			
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	imm	imm	>30	2	na	0.001			
Formic acid (30%)	Liquid	64-18-6	imm	imm	imm		nm	0.001			

Ganciclovir (3 mg/ml)	Liquid	82410-32-0	>240	>240	>240	5	<0.005	0.005			
Gemcitabine (38 mg/ml)	Liquid	95058-81-4	imm	>60	>240	5	<0.4	0.005			
Glycerine	Liquid	56-81-5	>240	>480	>480	6	0.03	0.01			
Glycerol	Liquid	56-81-5	>240	>480	>480	6	0.03	0.01			
Glycol alcohol	Liquid	107-21-1	imm	imm	imm		6.6	0.002			
Hydrochloric acid (16%)	Liquid	7647-01-0	imm	imm	imm		na	0.05			
Hydrochloric acid (32%)	Liquid	7647-01-0	imm	imm	imm		na	0.05			
Hydrogen peroxide (10%)	Liquid	7722-84-1	>10	>10	>480	6	<0.01	0.01			
Hydrogen peroxide (30%)	Liquid	7722-84-1	imm	imm	imm		>0.11	0.04			
Ifosfamide (50 mg/ml)	Liquid	3778-73-2	imm	imm	>240	5	<0.5	0.003		>480	6

Hazard / Chemical Name	Physical State	CAS	BT Act	BT 0.1	BT 1.0	EN	SSPR	MDPR	Cum 480	Time 150	ISO
Irinotecan (20 mg/ml)	Liquid	100286-90-6	imm	>240	>240	5	<0.1	0.0028			
Methotrexate (25 mg/ml, 0.1 N NaOH)	Liquid	59-05-2	>240	>240	>240	5	<0.001	0.001			
Mitomycin (0.5 mg/ml)	Liquid	50-07-7	>240	>240	>240	5	<0.0009	0.0009			
Nicotine (9 mg/ml)	Liquid	54-11-5	>480	>480	>480	6	<0.08	0.08			
Nitric acid (10%)	Liquid	7697-37-2	>60	>120	>480	6	na	0.05		>477	5
Nitric acid (30%)	Liquid	7697-37-2	imm	imm	imm		4.6	0.001			
Oxaliplatin (5 mg/ml)	Liquid	63121-00-6	imm	imm	imm		na	0.006			
Paclitaxel (Hospira) (6 mg/ml, 49.7 % (v/v) Ethanol)	Liquid	33069-62-4	>240	>240	>240	5	<0.01	<0.01			
Phosphoric acid (50%)	Liquid	7664-38-2	>480	>480	>480	6	<0.05	0.05			
Potassium chromate (sat)	Liquid	7789-00-6	>480	>480	>480	6	<0.005	0.005			
Potassium hydroxide (40%)	Liquid	1310-58-3	imm	imm	>30	2	0.7	0.001			
Propane -1,2,3-triol	Liquid	56-81-5	>240	>480	>480	6	0.03	0.01			
Sodium acetate (sat)	Liquid	127-09-3	imm	>480	>480	6	<0.1	0.05		>480	6
Sodium chloride (9 g/l)	Liquid	7647-14-5	>240	>240	>240	5	<0.02	0.02			
Sodium hydroxide (10%)	Liquid	1310-73-2	>240	>480	>480	6	<0.005	0.005			
Sodium hydroxide (40%)	Liquid	1310-73-2	imm	>30	>240	5	<0.005	0.005			
Sodium hydroxide (50%)	Liquid	1310-73-2	imm	>30	>240	5	0.85	0.01			
Sodium hydroxide (>95%, solid)	Solid	1310-73-2	>480	>480	>480	6	<0.01	0.01			
Sodium hypochlorite (10-15 % active chlorine)	Liquid	7681-52-9	>240	>240	>480	6	<0.6	0.05			
Sodium hypochlorite (5.25-6%)	Liquid	7681-52-9	>480	>480	>480	6	<0.025	0.025			
Sulfuric acid (18%)	Liquid	7664-93-9	>240	>240	>480	6	<0.05	0.05			
Sulfuric acid (30%)	Liquid	7664-93-9	>10	>240	>240	5	<0.05	0.05			
Sulfuric acid (50%)	Liquid	7664-93-9	imm	>30	>60	3	38	0.01			
Sulfuric acid dimethyl ester	Liquid	77-78-1	imm	imm	imm		>160	0.02			
Thiotepa (10 mg/ml)	Liquid	52-24-4	imm	imm	imm		na	0.001			
Vincristine sulfate (1 mg/ml)	Liquid	2068-78-2	>240	>240	>240	5	<0.001	0.001			
Vinorelbine (0.1 mg/ml)	Liquid	71486-22-1	>240	>240	>240	5	<0.0209	0.00209			

BTAct (Actual) Breakthrough time at MDPR [mins] **BT0.1** Normalized breakthrough time at 0.1 µg/cm²/min [mins] **BT1.0** Normalized breakthrough time at 1.0 µg/cm²/min [mins] **EN** Classification according to EN 14325 **SSPR** Steady state permeation rate [µg/cm²/min] **MDPR** Minimum detectable permeation rate [µg/cm²/min] **CUM480** Cumulative permeation mass after 480 mins [µg/cm²] **Time150** Time to reach cumulative permeation mass of 150 µg/cm² [mins] **ISO** Classification according to ISO 16602 **CAS** Chemical abstracts service registry number **min** Minute **>** Larger than

< Smaller than **imm** Immediate (< 10 min) **nm** Not tested **sat** Saturated solution **N/A** Not Applicable **na** Not attained **GPR grade** General purpose reagent grade ***** Based on lowest single value **8** Actual breakthrough time; normalized breakthrough time is not available **DOT5** Degradation after 5 min **DOT30** Degradation after 30 min **DOT60** Degradation after 60 min **DOT240** Degradation after 240 min **BT1383** Normalized breakthrough time at 0.1 µg /cm²/min [mins] acc. ASTM F1383

Important Note.