DUPONT™ TYVEK® 800 J

TECHNICAL DATA SHEET

CAT III

T3

T4

T5

T6

EN 1073-2

EN 1149-5

EN 14126



PRODUCT INFORMATION

DuPont™ Tyvek® 800 J. Hooded coverall. Stitched and over-taped seams. Thumb loops. Elastication at wrists, ankles and face. Elasticated waist (glued-in). Tyvek® zipper. Self-adhesive zipper and chin flap. White.

ATTRIBUTES

Full Part Number	TJ0198TWHPI
Fabric/Materials	TYVEK®
Design	Hooded coverall with elastics and thumb loops
Seam	Stitched and over-taped, orange
Color	White
Sizes	SM, MD, LG, XL, 2X, 3X, 4X, 5X, 6X, 7X
Quantity/Box	25 per box, individually packed.

FEATURES

DuPont™ Tyvek® 800 J. Hooded coverall available in white, in sizes SM to 7X. Robust yet lightweight (<300g). Self-adhesive zipper flap. Self-adhesive chin flap for tight seal of suit to mask. Elasticated face, wrists and ankles as well as glued-in waist elastic. Thumb loops to prevent sleeves from riding up. Tyvek® 800 garments provide an ideal balance of protection, durability and comfort. They benefit from the use of a specific 'impervious technology' to achieve an effective barrier against many low-concentrated water-based inorganic chemicals (even under pressure) and small-sized hazardous particulates, as well as oil repellency. The fabric is antistatically treated. Silicon non-added.
Applications for Tyvek® 800 J garments include those in very humid applications requiring chemical, liquid protection and/or oil repellency. Typical activities include industrial cleaning, work at petrochemical installations, in sewers and maintenance operations.

- Certified according to Regulation (EU) 2016/425
- Chemical protective clothing, Category III, Type 3-B, 4-B, 5-B and 6-B
- EN 14126 (barrier to infective agents), EN 1073-2 (protection against radioactive contamination)
- Antistatic treatment (EN 1149-5) - on inside
- Stitched and over-taped seams for protection and strength
- Tyvek® zipper and zipper flap for enhanced protection

SIZETABLE

PRODUCT SIZE	ARTICLE NUMBER	ADDITIONAL INFO
SM	D15441654	
MD	D15441661	
LG	D15441676	
XL	D15441684	
2X	D15441698	
3X	D15441708	
4X	D15441717	MTO
5X	D15441728	MTO
6X	D15441735	MTO
7X	D15441740	MTO

PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL RESULT	EN
Abrasion Resistance [7]	EN 530 Method 2	>100 cycles	2/6 [1]
Basis Weight	DIN EN ISO 536	59 g/m^2	N/A
Colour.	N/A (598)	White	N/A
Flex Cracking Resistance [7]	EN ISO 7854 Method B	>15000 cycles	4/6 [1]
Puncture Resistance	EN 863	>10 N	2/6 [1]
Resistance to water penetration	DIN EN 20811	>25 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	No antistatic treatment	N/A
Tensile Strength (MD)	DIN EN ISO 13934-1	>60 N	2/6 [1]
Tensile Strength (XD)	DIN EN ISO 13934-1	>60 N	2/6 [1]
Thickness (PPSH-249)	DIN EN ISO 534	150 µm	N/A
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.	10 years [6]	N/A
Type 3: Resistance to Penetration by Liquids (Jet Test)	EN 17491-3	Pass [7]	N/A
Type 4: Resistance to Penetration by Liquids (High Level Spray Test)	EN ISO 17491-4, Method B	Pass	N/A
Type 5: Inward Leakage [11]	EN ISO 13982-2	0.5 %	N/A
Type 5: Inward Leakage of Airborne Solid Particulates	EN ISO 13982-2	Pass [7]	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)	ISO 5636-5	Yes	N/A
Air Permeability (Gurley method)	ISO 5636-5	>500 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, o-Xylene	EN ISO 6530	>80 %	1/3 [1]
Repellency to Liquids, Butan-1-ol	EN ISO 6530	>90 %	2/3 [1]
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, Butan-1-ol	EN ISO 6530	<1 %	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]
Resistance to Penetration by Liquids, o-Xylene	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	log ratio >5	3/3 [2]
Resistance to Penetration by Blood and Body Fluids using Synthetic Blood	ISO 16603	20 kPa	6/6 [2]
Resistance to Penetration by Blood-borne Pathogens using Bacteriophage Phi-X174	ISO 16604	14 kPa	5/6 [2]
Resistance to Penetration by Contaminated Liquids	EN ISO 22610	>75 min	6/6 [2]
Resistance to Penetration by Contaminated Solid Particles	ISO 22612	log cfu <1	3/3 [2]

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

PERMEATION DATA FOR DUPONT™ TYVEK® 800 J



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 (10%)	Liquid	64-19-7	imm	imm	imm		<16	0.02			
Acetic acid (2%)	Liquid	64-19-7	imm	imm	>30	2	<3	0.02			
Acetic acid (30%)	Liquid	64-19-7	imm	imm	imm		<120	0.02			
Acetic acid (5%)	Liquid	64-19-7	imm	imm	imm		<20	0.02			
Ammonium hydroxide (16%)	Liquid	1336-21-6	imm	imm	imm		<1800	0.04			
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	>10	>240	>240	5	0.002	0.001			
Caustic ammonia (16%)	Liquid	1336-21-6	imm	imm	imm		<1800	0.04			
Caustic soda (10%)	Liquid	1310-73-2	>480	>480	>480	6	<0.05	0.05			
Caustic soda (50%)	Liquid	1310-73-2	>10	>30	>30	2	na	0.05			
Cisplatin (1 mg/ml)	Liquid	15663-27-1	>240	>240	>240	5	<0.002	0.002			
Cyclo phosphamide (20 mg/ml)	Liquid	50-18-0	>240	>240	>240	5	<0.002	0.002			
Doxorubicin HCl (2 mg/ml)	Liquid	25136-40-9	>240	>240	>240	5	<0.007	0.007			
Ethane 1,2-diol	Liquid	107-21-1	imm	imm	>10	1	3.1	0.05			
Ethanol	Liquid	64-17-5	imm	imm	imm		<300	0.03			
Ethyl alcohol	Liquid	64-17-5	imm	imm	imm		<300	0.03			
Ethylene glycol	Liquid	107-21-1	imm	imm	>10	1	3.1	0.05			
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	>120	>240	>240	5	<0.01	0.001			
Formaldehyde (10%)	Liquid	50-00-0	imm	imm	imm		na	0.03			
Formalin (10%)	Liquid	50-00-0	imm	imm	imm		na	0.03			
Gemcitabine (38 mg/ml)	Liquid	95058-81-4	imm	>240	>240	5	<0.01	0.001			
Glycol alcohol	Liquid	107-21-1	imm	imm	>10	1	3.1	0.05			
Hydrochloric acid (16%)	Liquid	7647-01-0	imm	imm	>30	2	na	0.02			

DUPONT™ TYVEK® 800 J

TECHNICAL DATA SHEET

HAZARD / CHEMICAL NAME	PHYSICAL STATE	CAS	BT ACT	BT 0.1	BT 1.0	EN	SSPR	MDPR	CUM 480	TIME 150	ISO
Hydrochloric acid (32%)	Liquid	7647-01-0	imm	imm	imm		<140	0.02			
Hydrofluoric acid (10%)	Liquid	7664-39-3	imm	imm	imm		<12	0.03			
Ifosfamide (50 mg/ml)	Liquid	3778-73-2	>240	>240	>240	5	<0.009	0.009			
Isopropanol	Liquid	67-63-0	imm	imm	imm		<1200	0.02			
Isopropanol (70%)	Liquid	67-63-0	imm	imm	imm		<600	0.02			
Isopropyl alcohol	Liquid	67-63-0	imm	imm	imm		<1200	0.02			
Isopropyl alcohol (70%)	Liquid	67-63-0	imm	imm	imm		<600	0.02			
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	<0.002	0.002			
Nitric acid (30%)	Liquid	7697-37-2	imm	imm	imm		<4.5	0.005			
Oxaliplatin (5 mg/ml)	Liquid	63121-00-6	imm	>240	>240	5	<0.1	0.008			
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	<0.06	0.06			
Potassium hydroxide (40%)	Liquid	1310-58-3	>120	>120	>120	4	na	0.05			
Propan -2-ol	Liquid	67-63-0	imm	imm	imm		<1200	0.02			
Propan -2-ol (70%)	Liquid	67-63-0	imm	imm	imm		<600	0.02			
Sodium hydroxide (10%)	Liquid	1310-73-2	>480	>480	>480	6	<0.05	0.05			
Sodium hydroxide (50%)	Liquid	1310-73-2	>10	>30	>30	2	na	0.05			
Sodium hypochlorite (10-15 % active chlorine)	Liquid	7681-52-9	>60	>480	>480	6	<0.05	0.05			
Sodium hypochlorite (5.25-6%)	Liquid	7681-52-9	>480	>480	>480	6	<0.025	0.025			
Spiritus	Liquid	64-17-5	imm	imm	imm		<300	0.03			
Sulfuric acid (18%)	Liquid	7664-93-9	>480	>480	>480	6	<0.05	0.05			
Sulfuric acid (30%)	Liquid	7664-93-9	>480	>480	>480	6	<0.005	0.005			
Thiotepa (10 mg/ml)	Liquid	52-24-4	>10	>240	>240	5	<0.01	0.001			

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

The permeation data published have been generated for DuPont by independent accredited testing laboratories according to the test method applicable at tha time (EN ISO 6529 (method A and B), ASTM F739, ASTM F1383, ASTM D6978, EN369, EN 374-3) 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 between 20 °C and 27 °C and at

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 minimum detectable 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® 500 and Tyvek® 600 only and i 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. The permeation data for gloves published have been generated according to ASTM F739 and to ASTM F1383. The degradation data for gloves published have been generated based on a gravimetric method. This degradation testing exposes one side of the glove material to the test chemical for four hours. The percent weight change after exposure is measured at four time intervals: 5, 30, 60 and 240 minutes.

Degradation Ratings:

- E: EXCELLENT (0-10% Weight Change)
- G: GOOD (11-20% Weight Change)
- F: FAIR (21-30% Weight Change)
- P: POOR (31-50% Weight Change)
- NR: NOT RECOMMENDED (Above 50% Weight Change)
- NT: NOT TESTED

Degradation is the physical change in a material after chemical exposure. Typical observable effects may be swelling, wrinkling, deterioration, or delamination. Strength loss may also occur.

Please use the permeation data provided as a part of the risk assessment to assist with the selection of a protective fabric, garment, glove 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 orshorter 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: 10/24/2022

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 indicate 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.

WARNING

MTO: Made to order terms & conditions apply. The garment does not protect against ionizing radiation.

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This garment and/or fabric are not flame resistant and should not be used around heat, open flame, sparks or in potentially flammable environments.

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CREATED ON: NOVEMBER 23, 2023

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