Technical Data Sheet

DuPont™ Tyvek® 800 J , TJ0198TWHPI

CAT III T3 T4 T5 T6 EN 1073-2

EN 1149-5 EN 14126

Tyvek® 800 J

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.

Certifications

- 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
- Additional taping of cuffs, ankles, hood and zipper flap are required to achieve a type 3 liquid tightness
- Face, wrist and ankle elastication for good fit

Packaging(Quantity/Box)

25 per box, individually packed.

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

Full Part Number: TJ0198TWHPI

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	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	DIN EN ISO 534	160 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

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	5 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	0.6 %	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

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
Thermal Resistance, Rct	EN 31092/ISO 11092	$26*10^{-3}$ m^2*K/W	N/A
Thermal Resistance, clo value	EN 31092/ISO 11092	0.168 clo	N/A
Water Vapour Resistance, Ret	EN 31092/ISO 11092	29 m^2*Pa/W	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	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

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 Procedure C	7 kPa	4/6 [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]

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

Permeation Data for Tyvek® 800 J

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	
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	

Permeation Data for Tyvek® 800 J

Hazard / Chemical Name	Physical State	CAS	BT Act	BT 0.1	BT 1.0	EN	SSPR	MDPR	Cum 480 Time 150 ISO
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	

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 (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 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.

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: 5/5/2020

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.

- MTO: Made to order terms & conditions apply.
- 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.

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.
Copyright © 2019 DuPont de Nemours Inc. All rights reserved. The DuPont Oval Logo, DuPont™, and all products denoted with ® or ™ are trademarks or registered trademarks of DuPont or its affiliates.