

DUPONT™ TYVEK® 1073B AND 1059B TRANSITION PRODUCTS TARGET SPECIFICATION PROPERTIES

Table I. Specification properties of DuPont™ Tyvek® (metric units)

Property	Comparable Test Method	Units	Current Tyvek® 1073B	Development Target Values Tyvek® 1073B	Current Tyvek® 1059B	Development Target Values Tyvek® 1059B
Basis Weight	ASTM D3776 ¹ EN ISO 536 ¹	g/m ²	74.6 [71.2–78.0]	74.6 [71.2–78.0]	64.4 [61.7–67.1]	64.4 [61.7–67.1]
Delamination	ASTM D2724 ²	N/2.54 cm	2.3 [1.6–3.1]	2.3 [1.5–TBD]	2.2 [1.5–2.9]	2.3 [1.5–TBD]
Gurley Hill Porosity	TAPPI T460 ¹ ISO 5636-5 ³	sec/100 cc	22 [8–36]	~22 [8–36]	20 [8–36]	~20 [8–36]

Notes: Specification properties are controlled to a nominal value and released within specifications. The customer is responsible for determining that Tyvek® is suitable for the intended application. The ranges represent the controlled minimum and maximum values in which the product is released. Specification properties are typical values based on roll averages, with samples taken uniformly across the sheet. These properties are representative for uncoated Tyvek® as sold by DuPont. Any downstream operations, such as coatings applied by sterile packaging manufacturers (SPMs), may change these values.

1. Modified sample size.
2. Modified for speed and gauge length.
3. Modified for sealing fluid characteristics.

Table II. Specification properties of DuPont™ Tyvek® (English units)

Property	Comparable Test Method	Units	Current Tyvek® 1073B	Development Target Values Tyvek® 1073B	Current Tyvek® 1059B	Development Target Values Tyvek® 1059B
Basis Weight	ASTM D3776 ¹ EN ISO 536 ¹	oz/yd ²	2.20 [2.10–2.30]	2.20 [2.10–2.30]	1.90 [1.82–1.98]	1.90 [1.82–1.98]
Delamination	ASTM D2724 ²	lb/in.	0.5 [0.4–0.7]	0.5 [0.3–TBD]	0.5 [0.3–0.7]	0.5 [0.3–TBD]
Gurley Hill Porosity	TAPPI T460 ¹ ISO 5636-5 ³	sec/100 cc	22 [8–36]	~22 [8–36]	20 [8–36]	~20 [8–36]

Notes: Specification properties are controlled to a nominal value and released within specifications. The customer is responsible for determining that Tyvek® is suitable for the intended application. The ranges represent the controlled minimum and maximum values in which the product is released. Specification properties are typical values based on roll averages, with samples taken uniformly across the sheet. These properties are representative for uncoated Tyvek® as sold by DuPont. Any downstream operations, such as coatings applied by sterile packaging manufacturers (SPMs), may change these values.

1. Modified sample size.
2. Modified for speed and gauge length.
3. Modified for sealing fluid characteristics.

For more information about DuPont™ Tyvek® for medical and pharmaceutical packaging and to find out how we can help you with packaging and regulatory compliance, call us today at 1.800.44.TYVEK or visit us at www.MedicalPackaging.DuPont.com.



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DUPONT™ TYVEK® 1073B AND 1059B TRANSITION PRODUCTS TARGET MISCELLANEOUS PROPERTIES (METRIC)

Table I. Miscellaneous properties of DuPont™ Tyvek® (metric units)

Property	Comparable Test Method	Units	Current Typical Values Tyvek® 1073B	Development Target Values Tyvek® 1073B	Current Typical Values Tyvek® 1059B	Development Target Values Tyvek® 1059B
Microbial Barrier	ASTM F1608	LRV	5.2	>5.0	4.7	>4.5
	ASTM F2638	% Penetration at Pmax	<0.3	<0.3	<0.5	<0.5
Bendtsen Air Permeability	ISO 5636-3	mL/min	572	572	671	671
Moisture Vapor Transmission Rate	TAPPI T523 ¹	g/m ² /24 hr	1615	>1600	1640	>1600
Hydrostatic Head	AATCC TM 127 EN 20811 ²	cm H ₂ O	147	147	145	145
Tensile Strength, MD	ASTM D5035 ³ EN ISO 1924-2 ³	N/2.54 cm	196	196	169	169
Tensile Strength, CD	ASTM D5035 ³ EN ISO 1924-2 ³	N/2.54 cm	200	200	169	169
Elongation, MD	ASTM D5035 ³ EN ISO 1924-2 ³	%	20	20	19	19
Elongation, CD	ASTM D5035 ³ EN ISO 1924-2 ³	%	24	24	23	23
Elmendorf Tear, MD	ASTM D1424 EN 21974	N	3.3	3.3	2.8	2.8
Elmendorf Tear, CD	ASTM D1424 EN 21974	N	3.5	3.5	3.0	3.0
Mullen Burst	ASTM D774 ISO 2758	kPa	1213	1213	1055	1055
Spencer Puncture	ASTM D3420 ⁴	J/m ²	8756	8756	6830	6830
Opacity	TAPPI T425 ISO 2471 ⁵	%	91	91	89	89
Thickness (Individual)*	ASTM D1777 ⁶ EN 20534 ⁷ EN ISO 534	µm	178	178	157	157

Notes: Miscellaneous properties represent typical values based on roll averages, except for thickness (individual), with samples taken uniformly across the sheet. Thickness (individual) typical values are based on a population of pooled individual data points from multiple rolls. Miscellaneous properties are not controlled in the process, and therefore, are subject to slight changes from "normal" process drift. Customers must conduct their own tests to ensure suitability for the intended application. These properties are representative for uncoated Tyvek® as sold by DuPont. Any downstream operations, such as coatings applied by sterile packaging manufacturers (SPMs), may change these values.

*Thickness variability target is equal to, or less than, incumbent products.

MD = machine direction; CD = cross direction; LRV = log reduction value

1. Test conditions: 23°C, 85% RH.
2. Rate of use: 60 cm H₂O/min.
3. Modified for speed and gauge length.
4. Modified for 9/16-in. (14.28-mm) probe.
5. Modified for different backing standards, area and illumination.
6. 7.15 psi, 0.625-in. diameter presser foot.
7. Surface 2 cm², pressure 14.5 psi (100 kPa).

For more information about DuPont™ Tyvek® for medical and pharmaceutical packaging and to find out how we can help you with packaging and regulatory compliance, call us today at 1.800.44.TYVEK or visit us at www.MedicalPackaging.DuPont.com.



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DUPONT™ TYVEK® 1073B AND 1059B TRANSITION PRODUCTS TARGET MISCELLANEOUS PROPERTIES (ENGLISH)

Table I. Miscellaneous properties of DuPont™ Tyvek® (English units)

Property	Comparable Test Method	Units	Current Typical Values Tyvek® 1073B	Development Target Values Tyvek® 1073B	Current Typical Values Tyvek® 1059B	Development Target Values Tyvek® 1059B
Microbial Barrier	ASTM F1608	LRV	5.2	>5.0	4.7	>4.5
	ASTM F2638	% Penetration at Pmax	<0.3	<0.3	<0.5	<0.5
Bendtsen Air Permeability	ISO 5636-3	mL/min	572	572	671	671
Moisture Vapor Transmission Rate	TAPPI T523 ¹	g/m ² /24 hr	1615	>1600	1640	>1600
Hydrostatic Head	AATCC TM 127 EN 20811 ²	in. H ₂ O	58	58	57	57
Tensile Strength, MD	ASTM D5035 ³ EN ISO 1924-2 ³	lbf/in.	44	44	38	38
Tensile Strength, CD	ASTM D5035 ³ EN ISO 1924-2 ³	lbf/in.	45	45	38	38
Elongation, MD	ASTM D5035 ³ EN ISO 1924-2 ³	%	20	20	19	19
Elongation, CD	ASTM D5035 ³ EN ISO 1924-2 ³	%	24	24	23	23
Elmendorf Tear, MD	ASTM D1424 EN 21974	lbf	0.7	0.7	0.6	0.6
Elmendorf Tear, CD	ASTM D1424 EN 21974	lbf	0.8	0.8	0.7	0.7
Mullen Burst	ASTM D774 ISO 2758	psi	176	176	153	153
Spencer Puncture	ASTM D3420 ⁴	in.-lbf/in. ²	50	50	39	39
Opacity	TAPPI T425 ISO 2471 ⁵	%	91	91	89	89
Thickness (Individual)*	ASTM D1777 ⁶ EN 20534 ⁷ EN ISO 534	mils	7.0	7.0	6.2	6.2

Notes: Miscellaneous properties represent typical values based on roll averages, except for thickness (individual), with samples taken uniformly across the sheet. Thickness (individual) typical values are based on a population of pooled individual data points from multiple rolls. Miscellaneous properties are not controlled in the process, and therefore, are subject to slight changes from "normal" process drift. Customers must conduct their own tests to ensure suitability for the intended application. These properties are representative for uncoated Tyvek® as sold by DuPont. Any downstream operations, such as coatings applied by sterile packaging manufacturers (SPMs), may change these values.

*Thickness variability target is equal to, or less than, incumbent products.

MD = machine direction; CD = cross direction; LRV = log reduction value

1. Test conditions: 23°C, 85% RH.
2. Rate of use: 60 cm H₂O/min.
3. Modified for speed and gauge length.
4. Modified for 9/16-in. (14.28-mm) probe.
5. Modified for different backing standards, area and illumination.
6. 7.15 psi, 0.625-in. diameter presser foot.
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