



Preliminary Product Specifications and Miscellaneous Properties of DuPont™ Tyvek® 40L

The customer is responsible for determining that the new Tyvek® 40L is suitable for the intended application and to complete the regulatory processes to gain market approval for their specific packaging applications.

Preliminary Product Specifications–English

| Property | Comparable Standard Test Method | Units | Nominal Value [range] Tyvek® 40L |
|---------------------------|---------------------------------|--------------------|----------------------------------|
| Basis Weight | ASTM D3776 ¹ | oz/yd ² | 1.21 [1.15-1.27] |
| Bendtsen Air Permeability | ISO 5636-3 ² | mL/min | 2350 [700-4000] |
| Mullen Burst | ISO 2758 | psig | 100 [80-120] |

Preliminary Product Specifications–Metric

| Property | Comparable Standard Test Method | Units | Nominal Value [range] Tyvek® 40L |
|---------------------------|---------------------------------|------------------|----------------------------------|
| Basis Weight | ASTM D3776 ¹ | g/m ² | 41 [39-43] |
| Bendtsen Air Permeability | ISO 5636-3 ² | mL/min | 2350 [700-4000] |
| Mullen Burst | ISO 2758 | kPa | 690 [550-830] |

1. Modified for sample size.

2. Modified to allow for a larger applicable measurement range based on the manufacturer's equipment validation.

For processing instructions, including sealing guidance, please refer to section 4 of the *DuPont™ Tyvek® 40L Preliminary Technical Documentation and ISO 11607 Compliance* document.

Preliminary Product Specifications and Miscellaneous Properties of DuPont™ Tyvek® 40L

Preliminary Miscellaneous Properties–English

| Property | Comparable Standard Test Method | Units | Typical Value Tyvek® 40L |
|----------------------|---------------------------------|-----------------------------|--------------------------|
| Opacity | ISO 2471 ¹ | % | 77 |
| Gurley Hill Porosity | TAPPI T460 ² | sec/100 cc-in. ² | 6 |
| Thickness | EN ISO 534 ³ | mils | 5 |
| Tensile Strength, MD | EN ISO 1924-2 ⁴ | lb _f /in. | 27 |
| Tensile Strength, CD | EN ISO 1924-2 ⁴ | lb _f /in. | 19 |
| Elmendorf Tear, MD | ASTM D1424 | lb _f | 0.4 |
| Elmendorf Tear, CD | ASTM D1424 | lb _f | 0.7 |
| Hydrostatic Head | AATCC TM 127 ⁵ | in. H ₂ O | 37 |
| Elongation, MD | EN ISO 1924-2 ⁴ | % | 12 |
| Elongation, CD | EN ISO 1924-2 ⁴ | % | 16 |
| Spencer Puncture | ASTM D3420 ⁶ | in.-lbs/in. ² | 26 |

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

1. Modified for different backing standards, area and illumination.
2. Electronic device.
3. Surface 2 cm², pressure 50 kPa.
4. Modified for speed, sample width (1 in.) and gauge length.
5. Rate of use: 60 cm H₂O/min.
6. Modified for probe size.

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Preliminary Miscellaneous Properties–Metric

| Property | Comparable Standard Test Method | Units | Typical Value Tyvek® 40L |
|----------------------|---------------------------------|-----------------------------|--------------------------|
| Opacity | ISO 2471 ¹ | % | 77 |
| Gurley Hill Porosity | TAPPI T460 ² | sec/100 cc-in. ² | 6 |
| Thickness | EN ISO 534 ³ | µm | 127 |
| Tensile Strength, MD | EN ISO 1924-2 ⁴ | N | 120 |
| Tensile Strength, CD | EN ISO 1924-2 ⁴ | N | 85 |
| Elmendorf Tear, MD | ASTM D1424 | N | 1.7 |
| Elmendorf Tear, CD | ASTM D1424 | N | 3.0 |
| Hydrostatic Head | AATCC TM 127 ⁵ | cm H ₂ O | 94 |
| Elongation, MD | EN ISO 1924-2 ⁴ | % | 12 |
| Elongation, CD | EN ISO 1924-2 ⁴ | % | 16 |
| Spencer Puncture | ASTM D3420 ⁶ | J/m ² | 4553 |

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

1. Modified for different backing standards, area and illumination.
2. Electronic device.
3. Surface 2 cm², pressure 50 kPa.
4. Modified for speed, sample width (2.54 cm) and gauge length.
5. Rate of use: 60 cm H₂O/min.
6. Modified for probe size.

Contact your local DuPont representative for product availability in your region.

Preliminary Product Specifications and Miscellaneous Properties of DuPont™ Tyvek® 40L

The preliminary specification and miscellaneous properties, as published, represent data from a minimum of three manufacturing campaigns. Specification properties are controlled to nominal value and released within specifications. The ranges represent the controlled minimum and maximum values in which the product is released. Specification properties are determined 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.

Preliminary specification and miscellaneous properties values will be refreshed, as necessary, upon data collection from additional campaigns and long-term variability discernment. Miscellaneous properties are not controlled in the process, and therefore, are subject to variation from “normal” process drift and will be refreshed on regular intervals.

Tyvek® 40L is spun on the same assets as those used for the current medical packaging styles. A different bonding process is used to create the unique balance of properties and visuals of the product. Tyvek® 40L is slit on assets that are qualified for medical and pharmaceutical packaging styles. Final specification properties will be published at the completion of the long-term variability assessment. In the meantime, it may be appropriate to implement additional quality control measures to ensure that the occurrence of unforeseen variability does not impact the validated conversion and packaging processes.

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The Quality Management Systems of Tyvek® have been certified according to ISO 9001/2008.

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