





**Tyvek.**  
air cargo covers

# DuPont™ Tyvek® Air Cargo Covers

## TECHNICAL DATA & DOCUMENTATION

### TEST DATA OF TYVEK® AIR CARGO COVERS FOR PHARMACEUTICALS

|                           |   |                           |
|---------------------------|---|---------------------------|
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| Related documents:        | n/a   |                           |

## DuPont™ Tyvek® Air Cargo Covers for Pharmaceuticals

Made with DuPont Tyvek® soft-bonded HDPE with Low Emissivity.

White Tyvek® is high reflective and breathable, optimal for thermal protection of pharmaceutical goods to prevent temperature peaks and dips. The metalized inlayer offers a low emissivity increasing the thermal protection.



### Developmental product data sheet (1)

|                                    | MD/XD <sup>(1)</sup> | ACC for Pharmaceuticals                               | Test Method       |
|------------------------------------|----------------------|---|-------------------|
| Basis weight                       | -                    | <b>64g/m<sup>2</sup> ± 3g/m<sup>2</sup></b>           | EN 1849-2(01)     |
| Tensile Strength                   | MD                   | <b>162N ± 20N</b>                                     | EN 12311-1:1999   |
|                                    | XD                   | <b>140N ± 15N</b>                                     |                   |
| Tensile Elongation                 | MD                   | <b>9% ± 2%</b>  | EN 12311-1:1999   |
|                                    | XD                   | <b>12% ± 8%</b>                                       |                   |
| Tear Strength Elmendorf            | MD                   | <b>12 N ± 5N</b>                                      | ISO 1974:2012     |
|                                    | XD                   | <b>8 N ± 3N</b>                                       |                   |
| Tear Strength Nail-Tearing         | MD                   | <b>63 N ± 5N</b>                                      | G.D.A.R.W.5.4.1   |
|                                    | XD                   | <b>50 N ± 5N</b>                                      |                   |
| Emissivity (USEM)                  | -                    | <b>12% ± 5%</b>                                       | US-Method         |
| Light reflection (SCI)             | -                    | <b>91.3% ± 3%</b>                                     | ASTM E1164        |
| Moisture Vapor Transmission (EVTR) | -                    | <b>650g/m<sup>2</sup> ± 150/m<sup>2</sup> for 24h</b> | DIN EN ISO 12572  |
| Water pressure (Hydrostatic Head)  | -                    | <b>173cmH<sub>2</sub>O ± 15cmH<sub>2</sub>O</b>       | DIN EN 20811 (92) |
| Breathability Gurley               | -                    | <b>540Gs ± 118Gs</b>                                  | TAPPI T460        |
| Water Tightness (WTI)              | -                    | <b>PASS</b>   | EN 1928-A (00)    |

(1) MD/XD: machine direction / cross direction

1) “Developmental product data sheet” means that observed values are reported while the product is still in the development phase. These values may change as development is proceeding and may be different from what is reported here when the final prototype is declared to be the commercial version.



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## DuPont™ Tyvek® Air Cargo Covers

### AVAILABLE AIR CARGO COVER SIZE AND NET WEIGHT :

| SAP Code  | Description                              | IATA | Actual Pallet Size in cm |       |        | Finished Cover Dimensions in cm |       |        | Weight      |
|-----------|--|------|--------------------------|-------|--------|---------------------------------|-------|--------|-------------|
|           |  |      | Length                   | Width | Height | Length                          | Width | Height | Net/EA (kg) |
| D15157268 | TOPCOVER - EURO W/S 49 X 33IN, 24IN HIGH |      | 120                      | 80    | 61     | 125                             | 84    | 61     | 0.35        |
| D15157257 | TOPCOVER UK/USA W/S 51 X 42IN, 24IN HIGH |      | 120                      | 100   | 61     | 130                             | 107   | 61     | 0.4         |
| D15072833 | TOPCOVER EURO W/S 100CM HIGH             |      | 120                      | 80    | 100    | 122                             | 82    | 100    | 0.5         |
| D14569801 | TOPCOVER - EURO W/S, 120CM HIGH          |      | 120                      | 80    | 120    | 122                             | 82    | 120    | 0.6         |
| D14569769 | TOPCOVER - UK/USA W/S, 122CM HIGH        |      | 120                      | 100   | 122    | 124                             | 104   | 112    | 0.7         |
| D15164888 | TOPCOVER - USA/UK XL W/S, 48IN HIGH      |      | 120                      | 100   | 122    | 130                             | 107   | 122    | 0.62        |
| D14569811 | TOPCOVER - EURO W/S, 160CM HIGH          |      | 120                      | 80    | 160    | 122                             | 82    | 160    | 0.8         |
| D14569778 | TOPCOVER - UK/USA W/S, 160CM HIGH        |      | 120                      | 100   | 160    | 124                             | 104   | 150    | 0.9         |
| D15164865 | TOPCOVER - USA/UK XL W/S, 64IN HIGH      |      | 120                      | 100   | 160    | 130                             | 107   | 163    | 0.8         |
| D14580045 | TOPCOVER - LD3 W/S 162CM HIGH            | AKE  | 200                      | 153   | 162    | 210                             | 160   | 165    | 1.6         |
| D14572363 | TOPCOVER - 88"L/D PAG W/S, 162CM HIGH    | PAG  | 317                      | 223   | 162    | 325                             | 230   | 165    | 2.6         |
| D14572320 | TOPCOVER - 96"L/D PMC W/S, 162CM HIGH    | PMC  | 317                      | 243   | 162    | 325                             | 250   | 165    | 2.7         |
| D14572350 | TOPCOVER - 88"U/D PAG W/S, 243CM HIGH    | PAG  | 317                      | 223   | 243    | 325                             | 230   | 246    | 3.4         |
| D14572318 | TOPCOVER - 96"U/D PMC W/S, 243CM HIGH    | PMC  | 317                      | 243   | 243    | 325                             | 250   | 246    | 3.5         |
| D15206084 | TOPCOVER - 96IN PMC Q7 W/S, 300CM HIGH   | PMC  | 317                      | 243   | 300    | 325                             | 250   | 305    | 4           |

All technical information set out herein is provided free of charge and is based on technical data which DuPont believes to be reliable.

Please verify that the dimensions given are applicable to your needs, as DuPont cannot accept liability for not verifying that product is commercially available and fit for purpose. This is a selection of covers specifications and can change without prior note. Tyvek™ Air Cargo Covers are available in two basic designs: a one piece top cover and a two piece top and bottom cover.

Please ask regarding other specific sizes or any required or print / branding options.

For further information on our products and services, please contact your account representative or email [malik.zeniti@dupont.com](mailto:malik.zeniti@dupont.com) or visit [www.aircargocovers.dupont.com](http://www.aircargocovers.dupont.com)

## **Safety and Environmental considerations:**

Tyvek® is non-toxic and chemically inert. Its strength and durability relative to its light-weight make it a resource efficient material compared to heavy and bulky products.

Tyvek® is made essentially of HDPE and should be disposed of according to local regulations. At the end of its lifecycle, it can be safely reprocessed as a polymer resin for other uses or alternatively incinerated for energy recovery.

Tyvek® end use temperatures should in all cases be under 90 °C.

Tyvek® melts at 135°C.

Tyvek® reaction to fire is that it substantially reduces flame spread according to ISO 3795 Horizontal measurement.

## **Storage considerations:**

Keep away from excessive heat and flames.

Use gloves to protect your hands while handling product.

For an extended shelf life, keep product in its original packaging, and adopt a best practice of first in first out (FIFO). It is recommended to use the covers within 2 years of supply to maintain highest efficiency.

Do not store Product in the vicinity of strong oxidizing agents.

## **Application considerations:**

Product is designed for a one-time or limited-use, in line with sanitary regulations and pest management best practices in the transportation industry.

DuPont™ Tyvek® Air Cargo Covers are Thermal covers, and therefore do not remove before arrival at final destination.

While widely used for load stabilization, stretch wrap films should not be used to completely cover the Tyvek® Air Cargo covers to avoid a greenhouse effect.

DuPont™ Tyvek® Air Cargo Covers must be properly secured to the ULD if exposed to strong winds or turbines while on the tarmac.

DuPont™ Tyvek® Air Cargo Covers is designed as secondary packaging and is not suitable for use in direct contact with food.

*This datasheet is prepared with the best of our knowledge of the product and its ingredients. Should you have any question regarding end-use, processing, safety or environmental considerations please contact with your DuPont representative.*



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## DuPont™ Tyvek® Air Cargo Covers

### Disclaimer:

The handling precaution information contained herein is given with the understanding that those using it will satisfy themselves that their particular conditions of use present no health or safety hazards. Since conditions of product use are outside of our control we make no warranties express or implied in relation thereto and therefore cannot accept any liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe any patents.

DuPont™ Tyvek® Air Cargo Covers for Pharmaceuticals have been designed for one-time use in line with sanitary regulations and pest management best practices. Sufficient pre-cooling and correct temperature management from start of the cool chain are essential for optimal performance.

DuPont is not liable for product damage during the use of the cover. DuPont is not liable for the efficacy of DuPont™ Tyvek® Air Cargo Covers for Perishable and Pharmaceuticals beyond a limited period of time. DuPont™ Tyvek® Air Cargo covers if kept in their original packaging and stored in a clean, cool and dry place can be used up to two years after date of purchase, according to our current knowledge.



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