

# DuPont™ Tyvek™ Air Cargo Covers for Pharmaceuticals

Advanced protection for temperature-sensitive pharmaceuticals

## Tyvek™ Air Cargo Covers vs. Competitive Thermal Covers: Case Study B November 11 – 13, 2014 – Homestead, Florida

### TEST PROTOCOL

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#### Objective

Measure and evaluate the temperature protection performance of each cover when exposed to identical conditions and without the influence of thermal mass (empty box test).

#### Pallet Configuration

- Three pallet loads, 48" x 40" x 48"
- Sixteen empty boxes (24" x 20" x 12") per pallet
- Four boxes per row

#### Products Tested

- Metallized spunbonded cover with approximate basis weight of 135 g/m<sup>2</sup> (MSB135)
- Metallized bubble wrap covers with approximate basis weights of 200, 235, and 415 g/m<sup>2</sup> (MBW200, MBW235, MBW415)
- Metallized Tyvek™ air cargo cover for pharmaceuticals with bottom (Tyvek™ WS)

#### Exposure Time

Test period from November 11 at 13:00 to November 13 at 11:00.

#### Weather Conditions

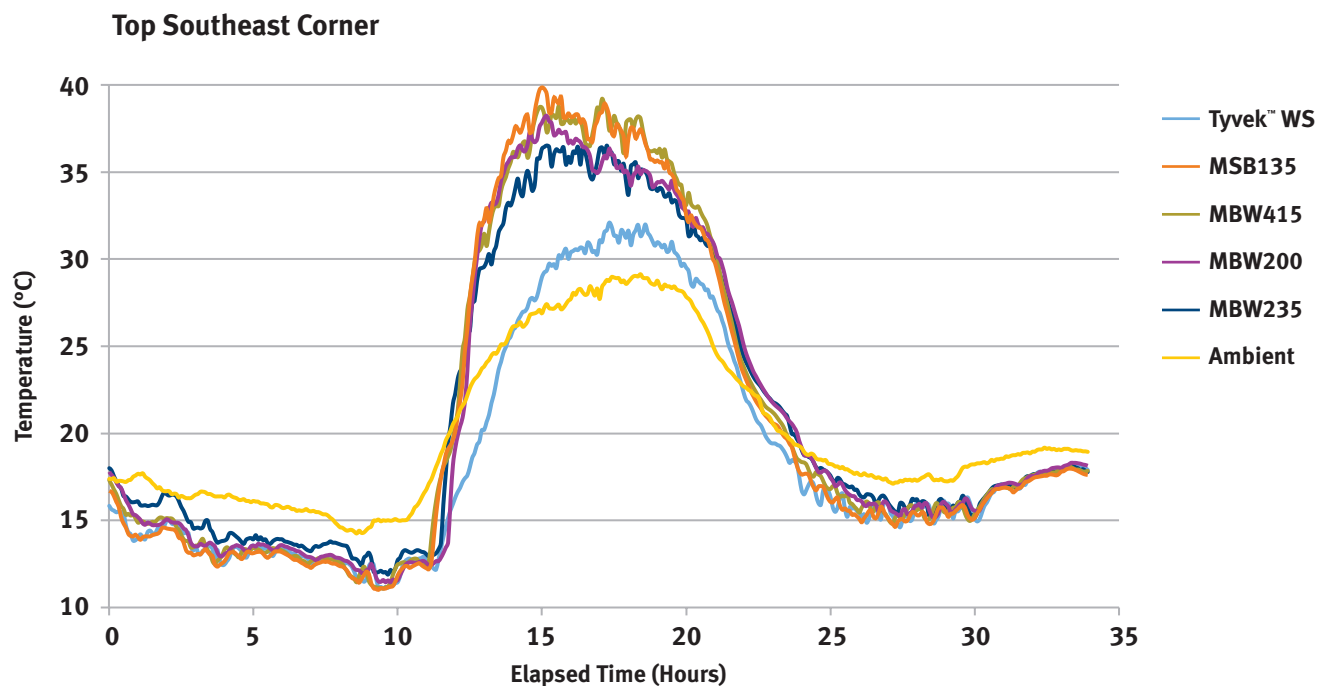
Full sun all day on November 12 with daytime temperatures in the low to mid 80°F range (26°C to 29°C).

#### Data Capture

Data logging conducted at known hot spot locations:

- Air temperature at top southeast corner, under cover
- Air temperature at south face center load, under cover
- Air temperature at top southwest corner, inside of box

## TEST RESULTS



### Observations

Graphs of temperature data demonstrate that Tyvek™ air cargo covers for pharmaceuticals offer better protection from elevated ambient temperature and upward thermal excursions caused by solar energy.

### Conclusion

When exposed to high solar radiation and ambient temperature, Tyvek™ air cargo covers for pharmaceuticals mitigate upward temperature excursions, which facilitate cooler load temperatures.

**For more information, call us at 1-800-44-TYVEK  
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