**TEST PROTOCOL**

**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/m² (MSB135)
- Metallized bubble wrap covers with approximate basis weights of 200, 235, and 415 g/m² (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
**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 or visit www.aircargocovers.dupont.com