

# NEW



FOR  
GREATER  
GOOD™

## TYVEK® XTREME™ W50 IN A CLASS OF ITS OWN

### TRIPLE CONTROL

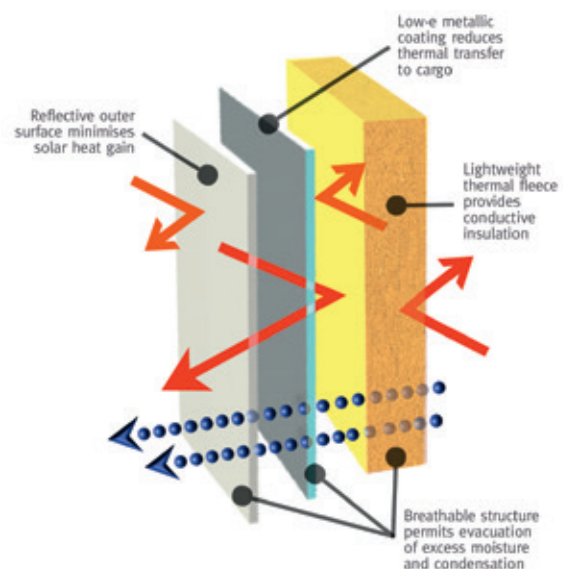
#### → The new Tyvek® Xtreme™ W50 Cargo Cover

DuPont has extended its market-leading range of Tyvek® Cargo Covers with the new Tyvek® Xtreme™ W50. Fitted with a proprietary insulative layer, Tyvek® Xtreme™ W50 retains the reflective and permeability characteristics of the Tyvek® product while extending both its hot and cold temperature performance span. The result is a product which can be used as a stand-alone barrier in CRT categories where there is a need for frost as well as heat protection and also as a supplementary component in packaging systems for 'cold temperature' products\*.

Designed to 'bridge the gap' between single-skin thermal covers and bulky thermal blankets, the Tyvek® Xtreme™ W50 is in a class of its own. By combining high reflectivity with a high efficiency thermal layer, the new cover performs as both a radiant shield and a conduction barrier. It has also been engineered to be vapour permeable yet fully weather-resistant, allowing protected pallets to evacuate condensation by 'breathing' whilst providing dependable protection from rain, snow and wind.

No other commercially-available cover on the market successfully combines these performance characteristics making the Tyvek® Xtreme™ W50 Cargo Cover a particularly reliable option when it comes to protecting 'room-temperature' and other pharma products. It can also be used as part of a qualified system to provide supplementary thermal protection to passive containers and to rigid, uninsulated ULDs.

### TRIPLE LAYER



### TRIPLE PROTECTION



\*Tyvek® Cargo Covers should be qualified in use and used as part of a validated risk management system in accordance with prevailing GDP and other regulatory requirements.

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### All-round protection

Both solar radiation and wind-chill effects can greatly impact the temperature of exposed pharma merchandise to levels way beyond the prevailing ambient temperatures. For example, on a typical sunny day, an ambient air temperature of 30°C might be associated with a temperature of around 60°C immediately below a plastic stretch-wrap film.

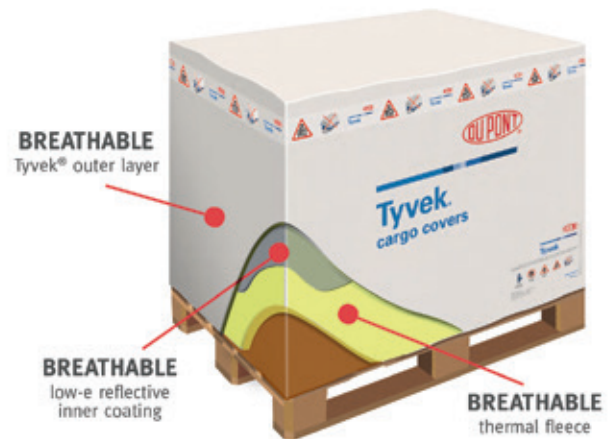
On the other hand, the effects of wind-chill, while not normally cooling a pharma load to below the ambient temperature will, nonetheless, lead to a very rapid rate of heat loss. In falling temperatures this is very important because this accelerated cooling can quickly bring products into the temperature 'danger-zone'. For example, an air temperature of 2°C with moderate winds can be as effective at cooling as an ambient temperature of -10°C.

### CONDENSATION RISK

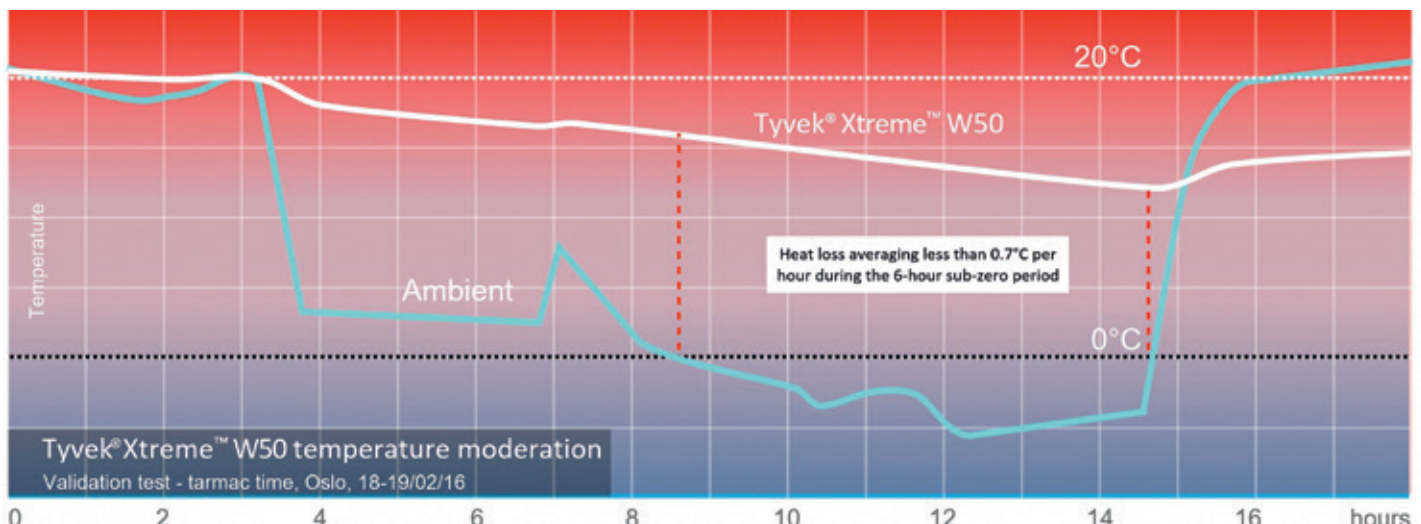
Furthermore, because we cannot control the weather or the dynamic environmental conditions on a typical intercontinental shipping lane there is always a real risk of damaging condensation forming under a non-breathable cargo cover. Condensation can compromise a cargo cover's thermal performance and lead to unnecessary packaging, label and product damage.

Whether this happens or not will depend on a variety of climatic and localised variables including relative temperatures, speed of temperature change, dew point, air movements, atmospheric pressure, pallet air volume, product and packaging moisture content, etc. Because cargo is not transported in 'steady-state' conditions, condensate formation is a real risk with any non-porous cargo cover given the right combination of factors.

### TRIPLE BREATHABILITY



Condensation is clearly evident on a stretch-wrapped pallet following a seven-hour flight from Hyderabad to Oslo in moderate weather conditions.



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**Tyvek.**  
cargo covers