

Case Study

Thermal Blankets Protect Beverage Shipment in -20°C

Challenge

When cross-border capacity continued to tighten, a major beverage company realized the need to replace heated capacity with dry containers. Bitter winds and sub-zero temperatures were pushing through Canada and the Midwest, creating more freeze risk for the imported beverage. The Beverage Company needed to keep their product moving through the supply chain, but heated capacity was difficult to secure. Using passive thermal protection inside dry containers seemed out of the question: it was too high-risk for shipments deemed time and temperature-sensitive.

Solution

The Beverage Company wanted to use 40' dry containers and thermal blankets rather than relying on heated capacity. But, the payload needed to be insulated on all sides to replace heated containers entirely. The QPS team engineered a sidewall insulation that could be easily applied with industrial magnets. Once the sidewalls were installed and pallets loaded, the Beverage Company could apply a heavy-duty CargoQuilt to cover the front, rear, and top of the payload—bringing the number of insulated sides to five. Once fully loaded and closed, the container's floor functioned as the sixth side of insulation, providing 360° protection predicted to last 8-10 days.

Insulated sidewall quilts are applied with industrial magnets and sealed with velcro for an extra layer of protection, preventing cool air movement



view video:
on.mjmc.com/Sidewall

CargoQuilt® protects top and rear of the payload



view video:
on.mjmc.com/Top



Industry:
Beverage



Application:
Cross Border,
Intermodal



Route:
Midwest USA to
Western Canada



Challenge:
Difficult to
secure heated
capacity for
cross-border
shipments in
winter months.



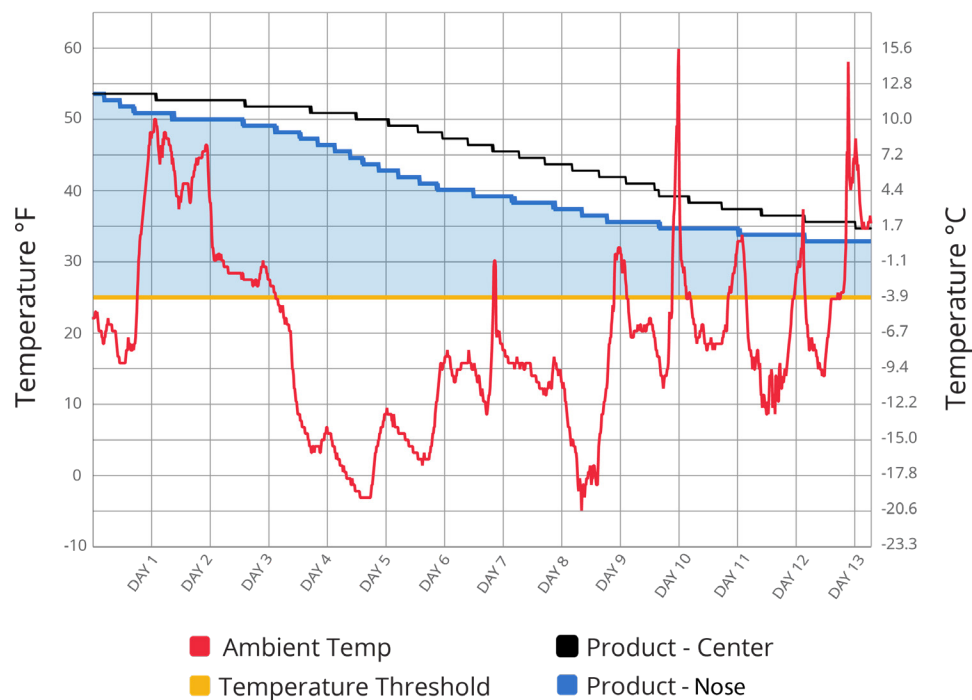
Solution:
Insulated side-
walls and quilt
covered all sides
of the payload,
protecting it in
sub-zero temps.

Test Results

Two intermodal 40' containers loaded with palletized, temperature sensitive beverages were sent from the Midwest, USA to Alberta, Canada. Temperature loggers were placed on three pallets per container to record both product and ambient temperatures during the shipment.

The test shipment lasted 14 days — significantly longer than the forecasted 8-10 day route. 70% of the shipment endured ambient temperatures below -4°C for 160 consecutive hours. Twice during the shipment, ambient conditions dropped below -10°C for 36 consecutive hours.

Despite longer than usual transit time and sub-zero temperatures, the product arrived in good condition. The CargoQuilt Kit solution was approved for corporate use by Quality.



“Cargo Quilts are an enabling and proven solution that protects corporate revenue on capacity-challenged freight lanes by providing a viable and sustainable solution to reefer service. Simple and quick installation keeps operations/warehouses running seamlessly.”

—Director of Supply Chain, Beverage Company