

Case Study

Thermal Blanket "Panel Kit" Protects Canned Soup from Freezing on Railcar Shipments

Challenge

When a loyal customer needed a solution to prevent canned food shipments from freezing during the winter season, the QProducts team responded. Securing climate-controlled railcars was out of the question due to financial impracticalities and strains on capacity. Due to the nature of the high-cube payloads (double-stacked pallets of canned food), traditional thermal blankets proved operationally inefficient and a new design was necessary. A thermal barrier, with an easy application, to separate the freezing ambient conditions from the product temperature during transit was required for success.

Solution

Using our flagship CargoQuilt® insulation, the QProducts engineers designed a "kit" consisting of twenty, lightweight, identical thermal panels. These reflective panels, or sections, are applied to each row of cargo as it is loaded onto the railcar using a standard extension pole. The extension pole can be inserted into a pocket located along the center edge of each of the panels. As the cargo is loaded and dunnage positioned per the loading pattern, the thermal barrier is gradually assembled throughout the process. The end result is a complete thermal barrier shielding the product from the freezing temperatures above the CargoQuilt Kit.

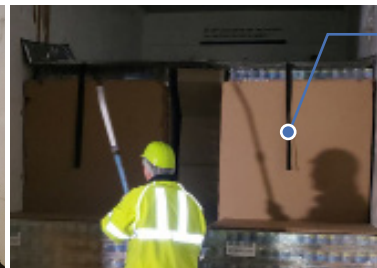
"One-man" application process



Applies without ladders or forklifts



Straps prevent shifting during transit; make unloading easy



"QPack Packing Solution" stores Railcar Kit neatly onto standard pallets for easy transport and effortless reuse.



Industry:
Food & Beverage
(Canned Foods)



Application:
Rail Industry



Route:
Wisconsin to
Pennsylvania



Challenge:
Freeze prevention
on Rail Shipment /
Operational
Efficiency



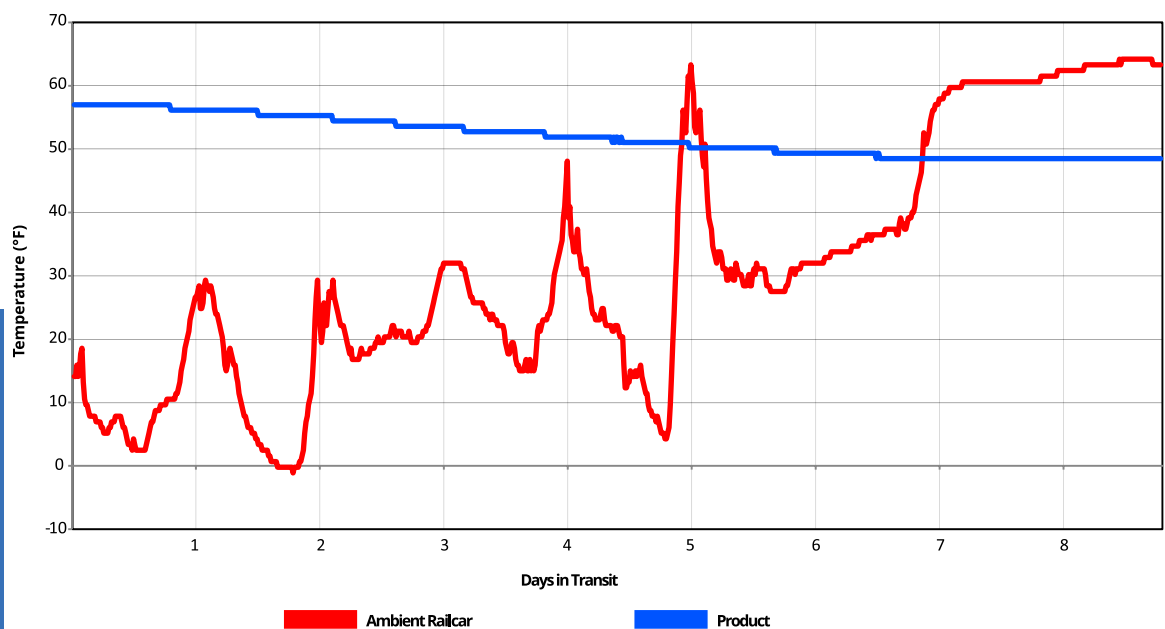
Solution:
CargoQuilt Railcar
Kit applies in
sections to create
thermal barrier

Results

A live shipment test was performed using the CargoQuilt Kit to protect canned goods from freezing on a 60' dry box car during transit. The load pattern called for 72 pallets, double stacked (120" tall) and would travel for 9 days through winter conditions.

Temperature recorders were placed in areas most susceptible to freezing (outer edge, bottom/top, near doors). The outside temps dropped below freezing for 6 out of the 9 days of transit, including 3 days in single digits.

Despite the temperature being below freezing for 114 of the first 120 hours of transit, product temperatures never dropped below 41°F. No signs of freezing were observed upon product inspection at the conclusion of the test.



“CargoQuilt was a great response for our rail soup requirements!”
— National Rail Operations, Leading Food Manufacturer

“We have found the kit of twenty single panels, or quilts, a safe alternative to the heavy traditional thermal blankets which required our employees to climb ladders and risk falls. The individual quilts are easily handled and applied by one person.”
— Warehouse East Lead, Leading Food Manufacturer