

Case Study

How A Chicago-Based Direct-to-Consumer Business Ships Frozen Meat Across the Country

Challenge

When celebrity chef Jeff Mauro, co-host of the Food Network's *The Kitchen*, began shipping signature meats nationwide, a reliable cold chain solution was needed. The art of transforming home delivery boxes into "makeshift freezers" requires two key ingredients: a refrigerant and a thermal barrier. Shipping product nationally called for frozen temperatures to be maintained for up to 72 hours, regardless of the time of year or geographic location. While navigating the growing industry of eCommerce, Chef Mauro's reputation of quality and high standards required that each D2C shipment arrive in the exact condition it left his freezer in Chicago.

Solution

QProducts' reply to Chef Mauro's request for a cold chain solution was simple, "YES CHEF!" QLiner uses the same insulation that QProducts has used for nearly three decades of service to the cold chain industry. Using a unique blend of woven PET fibers, sandwiched between a clear polyester substrate, the QLiner assembles easily into a box with a two-piece application. The QLiner has been qualified to protect perishable and/or frozen shipments with commodities ranging from fresh salads to frozen proteins. QLiner is a versatile solution available in a variety of thickness and density options based on the temperature, and customer, requirements for the commodity. In this case, our standard density, 2" QLiner was recommended to protect the integrity of frozen meats for up to 72 hrs.



Commodity:
Frozen Meat



Industry:
eCommerce



Application:
Direct-to-Consumer /
Food Delivery



Duration:
48-72 Hours



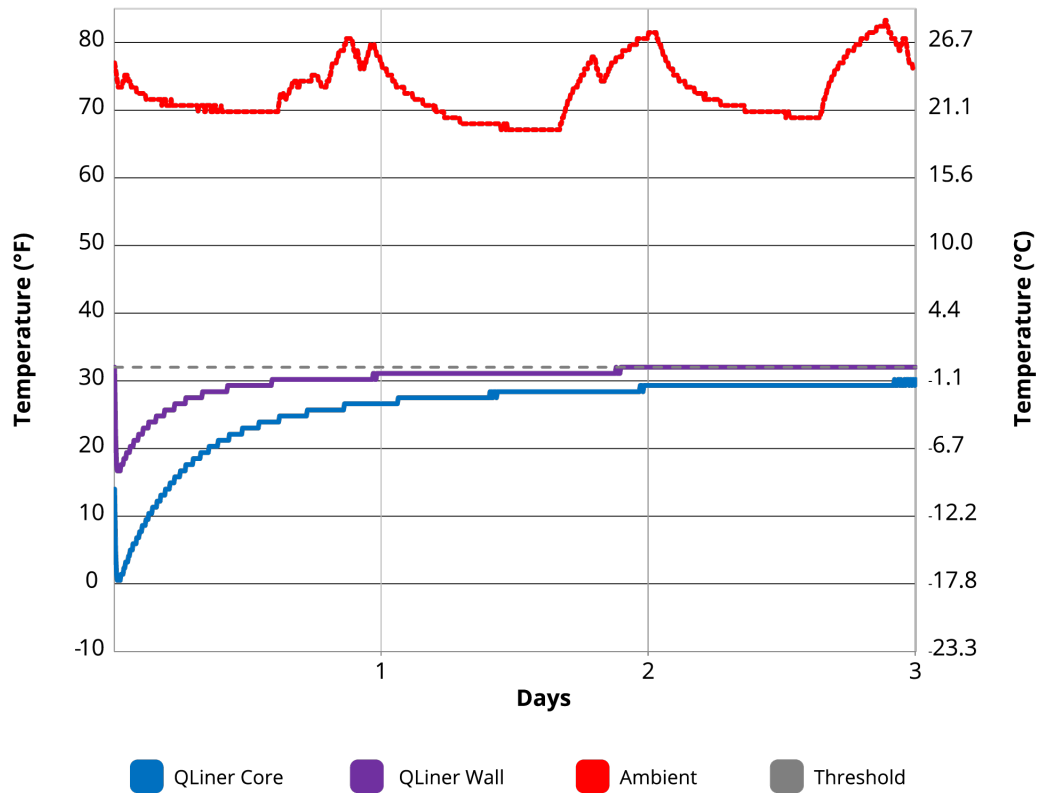
Challenge:
Maintain frozen
temperature of
meats for up to 72
hours



Solution:
QLiner

Test Results

A temperature study, using three 64oz. frozen gel packs as the refrigerant, was conducted to simulate the real-world environment of shipping frozen meats. The frozen proteins included 4 lbs. of chicken breasts and 2lbs. of beef steaks. Using a 2" QLiner as the insulation, the product and refrigerant were loaded into a 14x14x14 corrugate box, equipped with temperature probes, and sealed for 72 hours. The graph below displays the ambient temperature (outside the box) and the internal / product temperature (inside the box).



Results / Observations:

- The product temperature never reached above freezing for duration of 72-hour test.
- Using a dry ice / gel pack combo is likely to enhance the performance of QLiner for frozen items.
- Upon completion of the test, all proteins were still frozen and placed back into freezer.

“Every shipment is going great!! No complaints of warm food or defrosted items.”

—Director of Operations, Mauro Provisions