

Case Study

Global Chemical Manufacturer Protects Ocean Freight From Heat Using ContainerKit™ Thermal Solution

Challenge

In May of 2018, a packaging engineer from a global chemical manufacturer reached out to QProducts and Services (QPS) in hopes of finding an answer to his unique product transportation challenge. The QPS technical services team was presented with the chemical make up, temperature requirements, packaging, and shipping lanes associated with this active ingredient for a major OTC healthcare product. Of the biggest concern was the products instability when exposed to temperatures $>120^{\circ}\text{F}$ resulting in melting, clumping and damage to its packaging. The damaged caused by the temperature fluctuations had yielded many rejected loads, disruptions to customer manufacturing process, and up to a 50% loss in capital due to these effects. The combination of fast building heat inside of steel shipping containers and the difficulty in finding expensive reefer container service provided the perfect opportunity to explore passive thermal protection as a viable solution.

Solution

After careful analysis it was determined that CargoQuilt® Container Kits applied to 40ft dry containers, which were less costly and more accessible, would provide the adequate protection to the product from origin to destination along with a cost savings when compared to active temp control. Utilizing the 40ft CargoQuilt Container Kits made it possible to ship the temperature sensitive product in IBC's, drums, and paper bags from Houston TX to the APAC, supplying thermal protection to the interior of all six sides of fully loaded containers for extended transit times of 55+ days. Thus, successfully protecting the chemical product from extreme ambient temperature fluctuations, tact between 85°F - 95°F and preventing loss of product. The Container Kits proved to be easy to install, palletize and return for convenient reuse and installation by third party warehouses.



Industry:
Chemical
Products



Application:
Ocean Freight



Route:
Texas, USA
to APAC



Challenge:
Protect from
Heat



Solution:
ContainerKit
minimizes
temperature risk
during transit

Results

Utilizing ContainerKits allowed the shipper to eliminate an additional 42% cost in refrigerated container service, enabled year-round on-time delivery, regardless of temperature risk, and gained back the 50% in capital revenue they had lost. With an added value of reducing their carbon footprint and added flexibility to their transportation network, implementation of passive thermal protection was deemed a success.

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

CargoQuilt® protects top and rear of the payload

 view video:
on.mjmc.com/CargoQuilt



“With this being the third year using the Insulated ContainerKits there has not been any reports of clumping, loss, or disruptions in the supply chain. The use of the kits has provided a financial savings for both us and our customers. We are extremely happy with the success of the program!”

— Logistics Manager, Global Chemical Manufacturer