



## PTG ENGINEERS DESIGN REUSABLE SHIPPER

### BACKGROUND:

Premature infants begin life with struggles that full term babies don't endure. While a mother's breastmilk provides babies with excellent nutrition, they need additional nourishment. That's where Prolacta Bioscience, based in California, helps. The company has provided human milk-based nutritional products to more than **63,000\*** fragile premature infants through out the world, helping them thrive. In 2014, Prolacta challenged Packaging Technology Group (PTG) to design a reusable shipper for the safe, temperature-controlled transport of breastmilk.

### THE PROJECT:

Carefully vetted women from across the U.S. donate their excess raw breastmilk to Prolacta. Their breastmilk is shipped frozen and absolutely needs to remain frozen for at least 48 hours in transit. PTG engineers worked with Prolacta to design a custom shipper to be physically tested for a 72-hour period. The Thermal Profile to be used for the test would demonstrate worst case ambient shipping conditions ensuring that when the shipper passed the test, the product would arrive at its destination completely frozen. Additionally, Federal Express durability testing procedures for packages weighing up to 150 pounds was conducted to ensure the stability of the packaging for the safe transit of the breastmilk.



### THE CHALLENGE:

PTG engineers are accustomed to working on new projects stipulating specific temperature parameters and time in transit. For Prolacta's project, in addition to a shipper designed to travel at a specific temperature in transit, Prolacta wanted a shipper which could be reused to minimize their environmental impact. PTG engineers were challenged to design a new shipper robust enough to withstand multiple shipments back and forth from the breastmilk donors to Prolacta.

### THE SOLUTION:

PTG engineers immediately began working with new materials to create a solution to meet Prolacta's needs. Expanded Polypropylene (EPP) was selected because of its outstanding energy absorption, thermal insulation and multiple impact resistance. A custom shipper was designed to hold Prolacta's precious cargo of life-saving breastmilk. The EPP shipper is extremely robust and has been proven to be reusable for several years.

\*Estimated number of premature infants fed Prolacta's products from January 2007 to August 2020; data on file

***"Not only is breastmilk critical to nourishing fragile premature infants, it's also paramount to our company. PTG understood just how critical quality and safety are to us, and helped us craft the shipping solution that enables us to continue doing what we do."***

-SCOTT EAKER, CHIEF OPERATIONS OFFICER, PROLACTA BIOSCIENCE