

Improved System for Shipping Products at Cold or Freezer Temperatures for
Extended Periods

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Abstract

A US research institute has developed a new system for shipping virtually anything chilled or frozen, from the Alaska fisherman's halibut catch to gourmet beef to life-saving blood, plasma & pharmaceuticals. The patented, non-mechanical system is the first to keep shipments frozen up to 60 hrs (2.5 days) without refrigeration. Company is looking for partners in the medical, consumer, and industrial package shipping & transport industry that will license and commercialize the technology.

Description

The cold temperature shipping system was developed in partnership with the U.S. Department of Energy's Effective Environmental Protection Research Program which helps advance technologies that promote environmental protection and compliance. This system was initially developed for shipping soil samples at EPA-approved temperatures (-12 ± 5 °C / $1 - 19$ °F) from the field to the laboratory for analysis without losing volatile organic compounds. The system meets EPA 5035 and ASTM standards for shipping frozen samples.

Innovations and advantages of the offer

This advanced system by a US research institute uses proprietary phase change materials & optimized insulation to maintain ideal cold-shipping temperatures. The shipper chooses a temp. from -17 to 6 °C / 1 to 44 °, then chooses the shipping system materials that match that temp. The system maintains the sub-ambient temperature 60 hrs or longer. No current conventional packaging keeps contents cold or frozen longer.

This new approach solves problems for transcontinental shippers, those who curtail shipping during summer heat, and those who use refrigerated trucks for shipments that wouldn't stay cold long enough for standard package shipping.

Power-operated freezer compartments are cost-prohibitive for most uses. Standard or Styrofoam coolers packed with ice only work for shipments that arrive & are picked up quickly at their destination. Dry ice is a greenhouse gas. It is regulated because it sublimates to gaseous carbon dioxide, which displaces air in sealed aircraft. At -78 °C, it can damage container seals.

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For further information (including IPR status)

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