



+ TECHNOLOGY VIABILITY ASSESSMENT

Technology: Insulated Beverage Container

Lab: Natick Soldier Research, Development, and Engineering Center

Sponsor: OSD – Office of Secretary Defense

Overview

Today's service members rely on drinking cold water to thwart off heat-related ailments and improve ambient temperatures can range between 95° F and 120° F. Drinking water at palatable temperatures can increase exercise endurance capacity by $23 \pm 16\%$ as well as reduce heart rate and psychological strain, which is important for the health and well-being of a warfighter. Commercially available insulated coolers are projectile hazards during improvised explosive device scenarios. The Natick Soldier Research, Development, and Engineering Center (NSRDEC) has developed an insulated container for bottles and bladder-filled water (ICB) that can be secured to the vehicle for increased safety.

Technology

The cooler is safely secured with integrated tie-down straps on the inside or outside of a vehicle. The coolers have handles for ease of transport and an integrated flap that can be lifted to access bottled water. Tank Automotive Research, Development and Engineering Center (TARDEC) is interested in this device and has required it on a future ground DEMONSTRATOR vehicle.

Objectives

To address this issue, the US Army Natick has developed the ICB, a standardized, insulated cooler for bottles and bladder-filled water that can be easily strapped to vehicles. This durable, flexible, insulated cooler comes in small, medium, and large versions, with integrated tie-down straps for securing the cooler to a vehicle. All versions have handles for ease of transport and an integrated flap that can be lifted to access the bottled water. The ICB coolers can be collapsed when not in use and the high strength (2000 lbs) straps coupled with webbing prevent the cooler from moving during explosion scenarios.

Conclusion & Recommendation

The competitive advantages of the ICB containers are the mounting and secure storage capabilities, the anti-ballistic properties, and the ability to collapse for storage when empty. It is unknown if currently existing solutions are considered effective enough to preclude an alternative solution. However, prices of competing products in excess of \$200 suggests commercial opportunity may exist for the ICB as equivalent or more advanced technology when compared to items currently on the market. Conduct primary and secondary research to identify specific companies within the market(s) of greatest interest that are open to licensing new technologies developed outside of their own R&D efforts, and if so, identify how they prefer to be approached.

