



## INSULATED CONTAINERS FOR BOTTLED (ICBs) WATER

### PURPOSE:

In places such as Iraq and Afghanistan, average ambient temperatures can be anywhere between 95°F and 120°F. Under these conditions, heat-induced ailments can negatively affect Warfighter combat effectiveness through reduced endurance and cognitive function. These negative side effects can prove detrimental to mission success. Drinking cold water can drastically thwart off heat related ailments, as well as, improve cognitive function and endurance.

Realizing the benefits of drinking cold water, vehicle mounted soldiers in Iraq and Afghanistan started utilizing commercially available insulated cooler solutions to prolong the palatability of their water. This utilization of commercial coolers came about because "Warfighters are required to remain static inside their tactical vehicles from 6 to 48 hours. The Warfighter and the bottled water that they carry become warm due to extremely high ambient temperatures, solar radiation, and the heat from the vehicles. Neither warm nor hot water is palatable; thereby reducing the voluntary intake of water."<sup>1</sup>

Before the ICBs, there was no Military developed solution to insulate bottled water and prolong its initial cold temperature, and the commercially available coolers which were being utilized couldn't effectively be restrained, are heavy, and take up a significant amount of space. These factors play into the unrestrained stowage issue; whereby vehicle mounted soldiers are ineffectively mounting commercially available coolers and they, as well as, the bottles they contain, are becoming projectile hazards during IED scenarios.

### CHARACTERISTICS:

The suite of ICBs includes a small, medium and large version. Each version has an integrated access flap that can be lifted up to access the bottled water; MOLLE webbing to accommodate various attachments and integrated handles for ease of transport. The medium and large ICBs also have integrated high-strength 2000 Lb straps to keep the bag closed during an in-vehicle IED detonation scenario. The high strength straps coupled with the MOLLE webbing allow the ICBs to easily tie down in any vehicle and mitigate the threat of unrestrained bottled water, MREs or other small personal gear in an IED scenario. Custom sizes are available upon request.

The medium and large ICBs also include a double flip-top design which allows for the entire cooler volume to be accessed when loading, as well as, a removable waterproof liner, which attaches with Mil-SPEC snaps. The Large ICB is also capable of accommodating the High Stress Collapsible Water Bag (HSCWB) 5-gallon water bladder; allowing the HSCWB's detachable faucet to protrude through the integrated grommet on the side of the large ICB so that secondary containers can be easily filled. The large ICB also has a rubberized base for added traction and abrasion resistance.



COTS Coolers Utilized in Military Vehicles

### AT A GLANCE:

#### ■ STORAGE CAPACITY:

- Small: 5 Bottles/3 MREs
- Medium: 15 Bottle /11 MREs
- Large: 36 Bottles/28 MREs

#### ■ DIMENSIONS:

- Small: 15"W x 3"D x 11"H
- Medium: 10"W x 15"D x 11"H
- Large: 16"W x 21"D x 11"H

#### ■ WEIGHT:

- Small: 1.9 Lbs
- Medium: 3.9 Lbs
- Large: 9.0 Lbs

#### ■ PERFORMANCE (Hold Time at 100°F-120°F Ambient):

- Small: 0°F to 72°F = 17 Hrs
- Medium: 0°F to 72°F = 30 Hrs
- Medium (Aerogel): 0°F to 72°F = 56.5 Hrs
- Large: 0°F to 72°F = 48 Hrs

#### ■ FEATURES

- Blast proof
- Fire resistant
- Abrasion resistant
- Integrated tie-down straps
- Waterproof removable liner
- Access Flap
- Lightweight/compressible when empty

#### ■ CUSTOM SIZES AVAILABLE

UNCLASSIFIED



<sup>1</sup> Jessica Harshman, "Operational Forces Interface Group - Vehicular Mounted Combat Cooling System (VMCCS)," Natick Soldier Research, Development and Engineering Center, January 8, 2009.

**CAPABILITIES & BENEFITS:**

- Stores both bottled water and MREs
- 35% weight reduction when compared to COTS coolers.
- Integrated removable liner to contain ice for prolonged hold times.
- Tested to be blast proof, fire resistant and abrasion resistant for maximum safety and durability.
- Performance comparable to COTS coolers and 15%-25% better performing when constructed with Aerogel insulation.
- Integrated straps and multiple tie-down locations ensure maximum tie-down flexibility.

**POINT OF CONTACT:**

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**INSULATED CONTAINERS FOR BOTTLED (ICBs) WATER**

| SMALL | MEDIUM | MEDIUM (Aerogel) | LARGE |
|-------|--------|------------------|-------|
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