

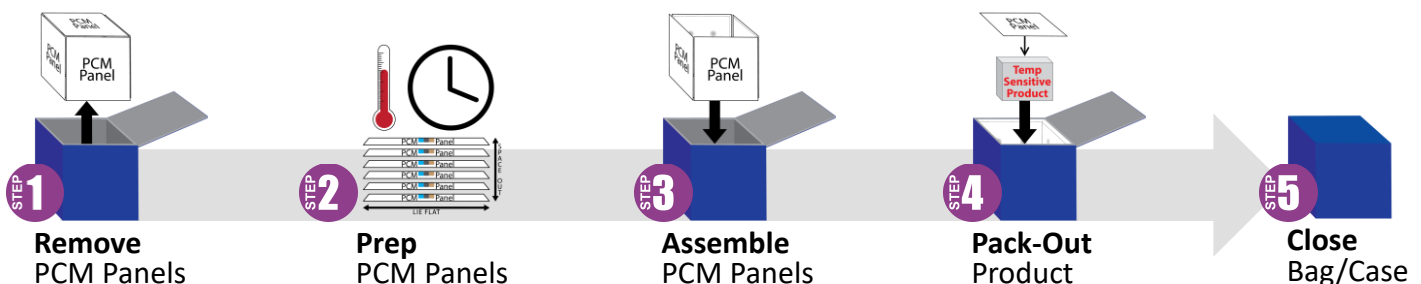
Cool Cube™

Best Practices

Call for
Technical Support
(608) 526-6901



- Prep the PCM (phase change material) panels before use according to one of the described methods provided by VeriCor.
- Ensure all components are clean and free of damage.
- Lay panels flat when turning them solid (to disperse liquid throughout the panel).
- Enable ample air flow around all panel sides.
 - Use spacers (pencils) or racks. →
- Freezing/melting times vary depending on number of panels being prepped and equipment being used.
- Assemble using all six panels for maximum hold time.
 - Using less panels does not change the holding temperature, but does decrease the hold time.
- Panels are reusable (10,000+ cycles).
 - End-of-life disposal: Panels are a plastic #2, typically recycled by businesses/communities. PCM is nontoxic and readily biodegradable.
- Use a calibrated data logger or other temperature monitoring device to observe internal temperature.
- Avoid unnecessary opening of the Cool Cube™ after loading payload. Opening of the Cool Cube™ will decrease hold time.
- An infrared temperature thermometer can assist in ensuring the panels reach a safe pack-out temperature (good for finding out the approximate temperature of each panel).
- The farther the ambient temperatures are from the melting point, the quicker PCM will change states (solidify/liquefy).



Various methods based on type of panel, equipment available & purpose.

Cool Cube™ Refrigerator PCM Panels

for vaccine, blood, medicine & more.

All Sizes



Blue Tab/Label



PCM Panel for **REFRIGERATOR** temps
(3-6°C / 37-43°F)

Remove → Prep (Freezer/Room) → Assemble → Pack-Out → Close

Part: CC-PCM-BV(s)
C/N

Do not expose to extreme heat (275°C) or use abrasive cleaners

VeriCorMed.com/PCM

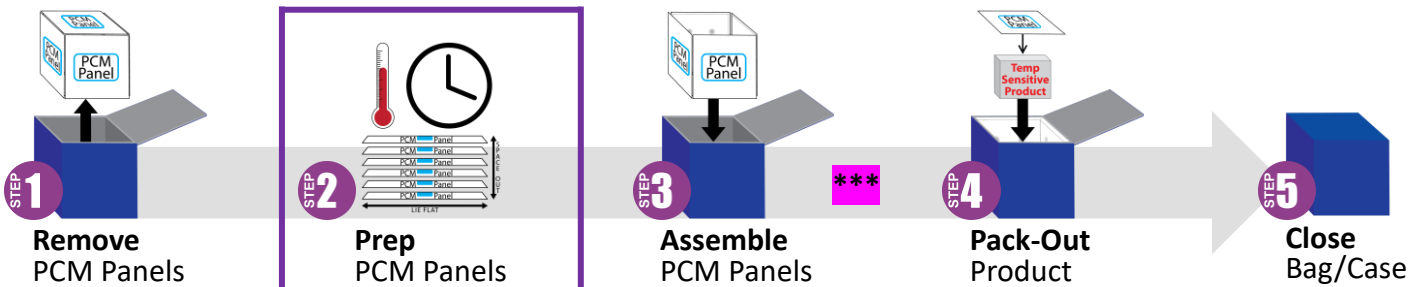
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VeriCorMed

Video



Prep Method E: Freezer/Room Prep to maintain 1-6°C



DO NOT assemble panels directly from a freezer, as they may be initially below 0°C.

Panel Prep

2.1 Lay panels flat in a freezer until all the PCM (phase change material inside the panel) turns solid. At -15°C/5°F the PCM will solidify in a couple hours.

2.2 Transfer panels into a room temperature environment just before use to allow the PCM inside to rise to the optimal 1°C. Approximate times:

"03" size = 5 minutes

"08" size = 10 minutes

*Times based on a
20°C/68°F room.*

"28" size = 15 minutes

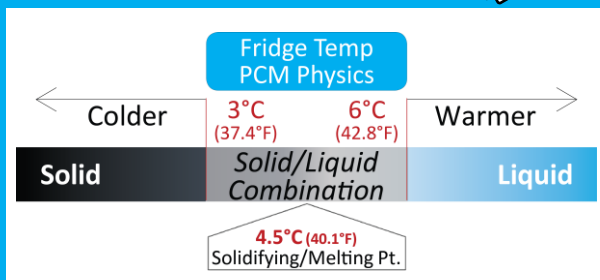
"96" size = 20 minutes

2.3 Wipe off condensate & shake. After frost turns to condensate, the panel is above 0°C. Shake panels to verify that the PCM is completely solid. If liquid is heard, re-freeze (Step 2.1) and proceed. Using liquid PCM decreases the hold time considerably.

***** After Step 3 (before pack-out), insert a thermometer** and close to monitor when the Cool Cube™ gets to the 1°C mark. If below the 1°C mark, wait until it warms up to 1°C before packing out. To speed up the process, transfer panels into a room temperature environment for a couple of minutes and re-check. Pack-out at 1°C will ensure a maximum hold time between 1° and 6°C.



PCM Panel Shake Test



ISTA 7D Thermal Performance Study

Lab-Qualified Hold Times When Starting with Solid PCM

	Qualified Temps:	2-8°C	1-6°C	1-10°C
Cool Cube™ 03	Utilizing Six (6)	65 hrs	39 hrs	70 hrs
Cool Cube™ 08	Refrigerator Temp	76 hrs	53 hrs	83 hrs
Cool Cube™ 28	PCM Panels	103 hrs	68 hrs	108 hrs
Cool Cube™ 96	(Blue Tab/Label)	126 hrs	112 hrs	128 hrs

Times listed are based on lab-validated, 24-hour cycles of a summer profile (hot ambient temperatures) without the additional thermal mass of a payload, which if conditioned properly, will improve hold times. Actual performance times may vary.