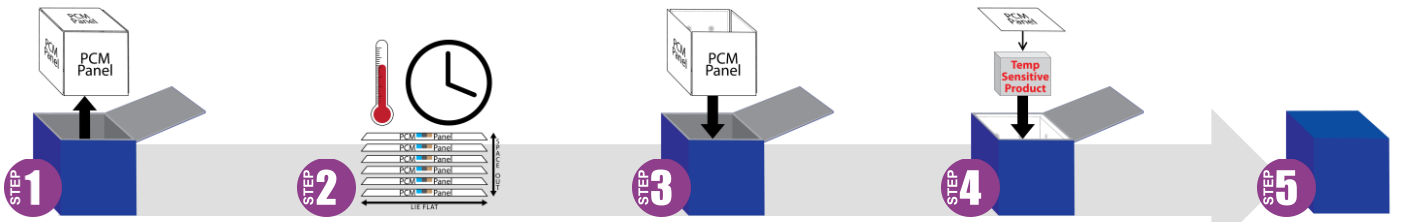
Cool Cube™
Best Practices

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).



Remove PCM Panels

Prep PCM Panels

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

Assemble PCM Panels

Pack-Out Product

Close Bag/Case

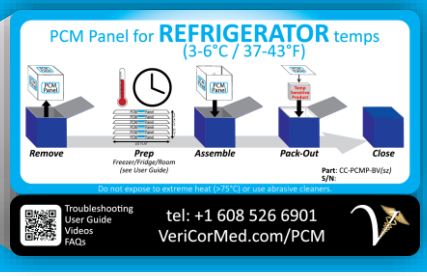
VERICOR LLC

Cool Cube™ Refrigerator PCM Panels

for vaccine, blood, medicine & more.

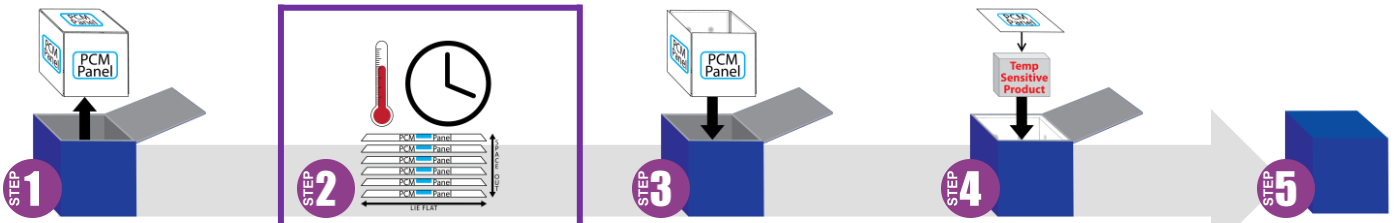
All Sizes

Blue Tab/Label



Video

Prep Method D: Fridge Prep to prevent freezing



Remove PCM Panels

Prep PCM Panels

Assemble PCM Panels

Pack-Out Product

Close Bag/Case

DO NOT assemble panels directly from a room temp, as they may be initially above 8°C.

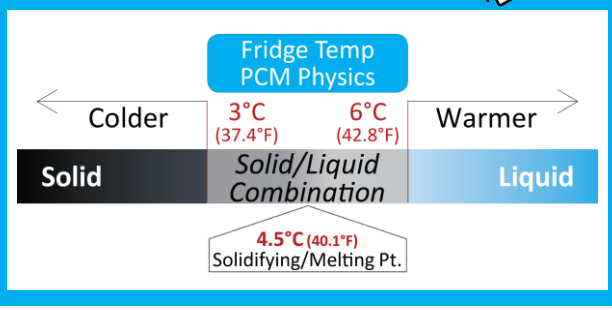
Panel Prep

2.1 Place panels in a fridge between 5° and 8°C for at least 24 hours before use so the PCM (phase change material inside the panel) is liquid.*

** Panels may be stored in the fridge until needed for assembly or the PCM solidifies. If a refrigerator maintains 5°C or above, the PCM within the panels will not get solid (the solidifying point is 4.5°C), keeping the PCM liquid indefinitely until pack-out. Liquid PCM panels will protect the product from freezing until the PCM becomes completely solid.*

2.2 Shake panels to verify the PCM is liquid. If solid, restart at step 2.1 to ensure the longest hold time. Liquid PCM will prevent the product from freezing (at refrigerator temps) in extreme cold the longest. Using solid PCM or panels with a solid/liquid combination decreases the hold time.

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 winter profile (cold ambient temperatures) without the additional thermal mass of a payload, which if conditioned properly, will improve hold times. Actual performance times may vary.