

# TECHNICAL DATA

## THERMABRICK® REFRIGERANT BRICKS

### TEMP+21

Data represents TEMP+21  
ThermaBrick® Refrigerant Bricks.  
ThermaBrick® Refrigerant Bricks are  
cost effective, passive refrigerants  
that are customizable to any size and  
shape, designed to reliably maintain  
your cargo's temperature.

TEMP+21 is an organic based phase  
change material designed for the  
controlled room temperature market  
with a working temperature of +15 to  
+25 °C.

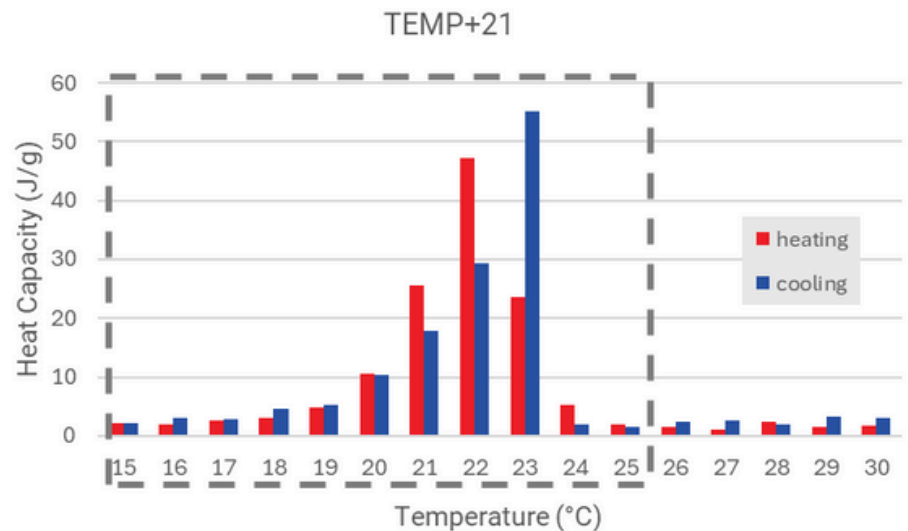
ThermaBrick® Refrigerant Bricks with  
Phase Change Materials (PCMs) offer  
precise temperature control to protect  
your payload during shipping transit.

ThermaBrick® Refrigerant Bricks are  
shape stable to most efficiently  
optimize packout. The Temprecision®  
Foam absorbancy actively masks  
leaks and punctures.

Rev. 1; 10.25



ThermaBrick® Refrigerant Bricks TEMP+21



Performance is representative of TEMP+21 ThermaBrick®  
Refrigerant Bricks. DSC is available upon request.

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## THERMABRICK® REFRIGERANT BRICKS

### TEMP+21

Properties		
Typical Application Temperature		+15 to +25 °C
Density (Liquid State)		0.84–0.87 g/cm <sup>3</sup> (at +20 °C)
Peak Melting Temperature		+22.1 °C
Total Heat Capacity (Melting)	Weight	130 J/g
	Volume	111 J/g
Peak Crystallization Temperature		+23.0 °C
Total Heat Capacity (Crystallization)	Weight	134 J/g
	Volume	115 kJ/l
Results obtained from three layer calorimetry test. Total heat capacity considers 15 °C temperature range across the peak transition temperature. Total heat capacity includes both the sensible and latent heat.		
Latent Heat	Melting	117 J/g
	Crystallization	118 J/g
Latent heat results obtained by DSC at a heating rate of 0.2 °C/min. The complete TEMP+21 ThermaBrick® Refrigerant Bricks showed no change in 3LC energy performance after 100 freeze-thaw cycles.		

**Disclaimer:** Information provided is based on laboratory testing and is intended as general guidance. End users should validate suitability under their specific conditions. Details are correct to the best of our knowledge at the time of writing but are subject to change without notice. Always refer to the latest version. Liability is limited to the value of the product sold. We are not responsible for performance in further manufacturing or in shipped contents. All trademarks and brand names are the property of Temprecision International. Please consult the Safety Data Sheet (SDS) for proper handling and storage information.