

# PlusICE<sup>®</sup> Phase Change Materials



**PCM**

PHASE CHANGE MATERIAL PRODUCTS LIMITED

## PlusICE SOLID-SOLID PCM SOLUTIONS

PlusICE Model	Phase Change Temp. (°C)	Phase Change Temp. (°F)	Latent Heat (kJ/kg)	Latent Heat (Btu/lb)	Density (g/cm <sup>3</sup> ) below PCT	Density (lb/ft <sup>3</sup> ) below PCT	Density (g/cm <sup>3</sup> ) above PCT	Density (lb/ft <sup>3</sup> ) above PCT	Thermal Conductivity (W/m K) below PCT	Thermal Conductivity (Btu / ft <sup>2</sup> h F) below PCT	Thermal Conductivity (W/m K) above PCT	Thermal Conductivity (Btu / ft <sup>2</sup> h F) above PCT
PlusICE X40	40	104	131	56	1046	65	986	62	0.253	0.146	0.209	0.121
PlusICE X80	80	176	192	83	1193	74	1120	70	0.361	0.209	0.335	0.194
PlusICE X180	180	356	301	129	1330	83	1220	76	0.993	0.574	0.508	0.294

We have recently introduced a specialised group of PCMs that undergo a solid/solid phase transition with the associated absorption and release of large amounts of heat. These materials change their crystalline structure from one lattice configuration to another at a fixed and well-defined temperature, and the transformation can involve latent heats comparable to the most effective solid/liquid PCMs.

Such materials are useful because, unlike solid/liquid PCMs, they do not require nucleation to prevent super-cooling. Additionally, because it is a solid/solid phase change, there is no visible change in the appearance of the PCM (other than a slight expansion/contraction), and there are no problems associated with handling liquids, i.e. containment, potential leakage, etc.

Currently, we have three products in this range, PlusICE X40 (phase change temperature: +40 °C (104 °F)), PlusICE X80 (+80 °C (176 °F)), and PlusICE X180 (+180 °C (356 °F)), although we are in the process of developing the range further. For more information please use the contact link or email [info@pcmproducts.net](mailto:info@pcmproducts.net) with details of your requirements

For additional information contact;

Distributor / Installer Stamp