

## Comparison of GrafX with Potting Material, Thermal Pads, and Wax

	<b>GrafX (Graphite+PCM)</b>	<b>Potting Material</b>	<b>Thermal Pads</b>	<b>Wax</b>
<b>Thermal Conductivity</b>	Very High. >15 W/m-k	Low. Typically around 1-2 W/m-k	Very Low. < 1 to 2 W/m- K	Very Low < 0.5 W/m-K
<b>Latent Heat (Heat Storage Capacity)</b>	Very High 200 to 220 kJ/kg	Very Low	Very Low	High
<b>Safety (Ability to mitigate thermal runaway and prevent fires)</b>	Very high, can sustain fire and flames for long duration. Typically, slows down time to cell venting and can prevent further escalation into explosion and fire.	Medium to High; Creates insulation barrier but cannot stop cell explosion and fire in thermal runaway event	None	Low, PCMs like waxes are flammable
<b>Weight</b>	Low (0.4 to 0.5 kg per kWh). Density: about 900 kg/m <sup>3</sup>	Heavy	Low	Low
<b>Specific Heat</b>	Very High 2.1 – 2.4 kJ/kg-K	Low	Low	High
<b>Repairability of Batteries</b>	Easily repairable. Battery pack can be easily disassembled and reassembled with same GrafX.	Difficult to repair battery pack as material hardens like cement.	Repairable.	Cumbersome to remove wax and repair.
<b>Contact Area</b>	Excellent	Excellent	Very low (only top and bottom areas of packs are in contact with pads)	Good