

## PX52

RUBITHERM® PX is a heat storage powder which contains phase change material (PCM) within a secondary supporting structure, in this case a hydrophilic silica powder. The result is that the bound PCM is always a solid in its macroscopic form. Used in thermal energy storage applications, the bound PCM melts and congeals, thus storing and releasing the latent heat associated with the phase change process.

Advantageous is that for many applications, large quantities of thermal energy can be stored and released at a relatively constant temperature, even when limited volumes and low differences in operating temperature are applicable.

We look forward to discussing your particular questions, needs and interests with you.

Properties:

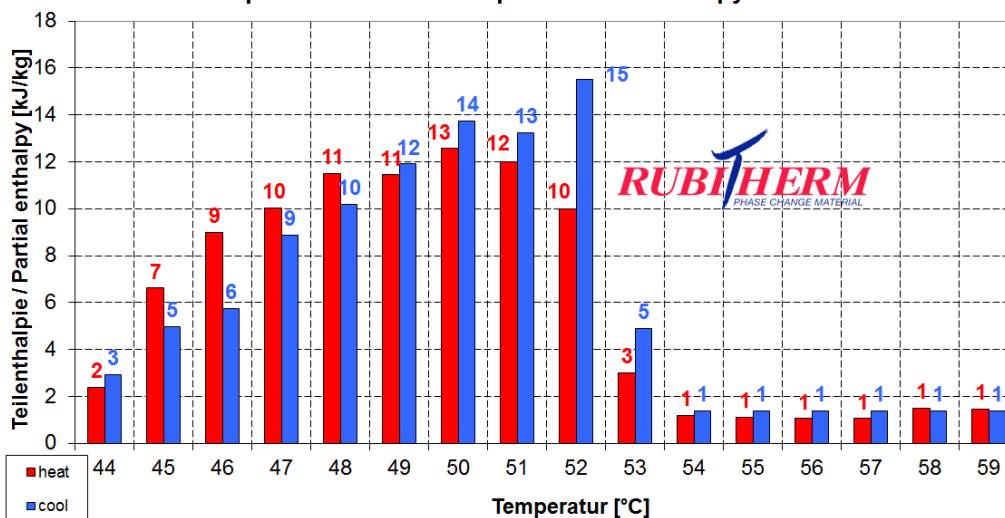
- high thermal energy storage capacity
- heat storage and release take place at relatively constant temperatures
- no supercooling effect, chemically inert, almost no volumen expansion
- long life product, with stable performance through the phase change cycles
- melting temperature range between approx. -4°C and 100 °C



### The most important data:

	Typical Values	
<b>Melting area</b>	<b>49-53</b>	<b>[°C]</b>
	main peak: 52	
<b>Congealing area</b>	<b>52-48</b>	<b>[°C]</b>
	main peak: 52	
<b>Heat storage capacity ± 7,5%</b>	<b>100</b>	<b>[kJ/kg]*</b>
Combination of latent and sensible heat in a temperatur range of 44°C to 59°C.	<b>28</b>	<b>[Wh/kg]*</b>
<b>Specific heat capacity</b>	<b>2</b>	<b>[kJ/kg·K]</b>
<b>Bulk density</b>	<b>0,65</b>	<b>[kg/l]</b>
<b>Heat conductivity (both phases)</b>	<b>0,1</b>	<b>[W/(m·K)]</b>
<b>Flash point (PCM)</b>	<b>180</b>	<b>[°C]</b>
<b>PCM content</b>	<b>60</b>	<b>[%]</b>
<b>Max. operation temperature</b>	<b>80</b>	<b>[°C]</b>

Beispiel: PX52 Teilenthalpie / Partial enthalpy distribution



Rubitherm Technologies GmbH  
 Imhofweg 6  
 D-12307 Berlin  
 Tel: ☎49 (30) 71096220  
 Fax: ☎49 (30) 7109622-22  
 E-Mail: info@rubitherm.com  
 Internet: www.rubitherm.com

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\*Measured with 3-layer-calorimeter.