

## SP21EK



The creation of the latent heat material RUBITHERM® SP has led to a new and innovative class of low flammability PCM.

RUBITHERM® SP consists of a unique composition of inorganic components. RUBITHERM® SP is preferably used as macroencapsulated material. Densities of more than 1,0 kg/l are achieved.

This and all properties mentioned below make RUBITHERM® SP to the preferred PCM used in construction. Both passive and active cooling can easily be realized.

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

- Properties:**
- stable performance throughout the phase change cycles
  - high thermal storage capacity per volume
  - limited supercooling (2-3K dependig on volume and cooling rate),
  - low flammability, non toxic
  - different melting temperatures between -50°C und 70°C are available
  - encapsulation necessary, minimum volume: 50ml

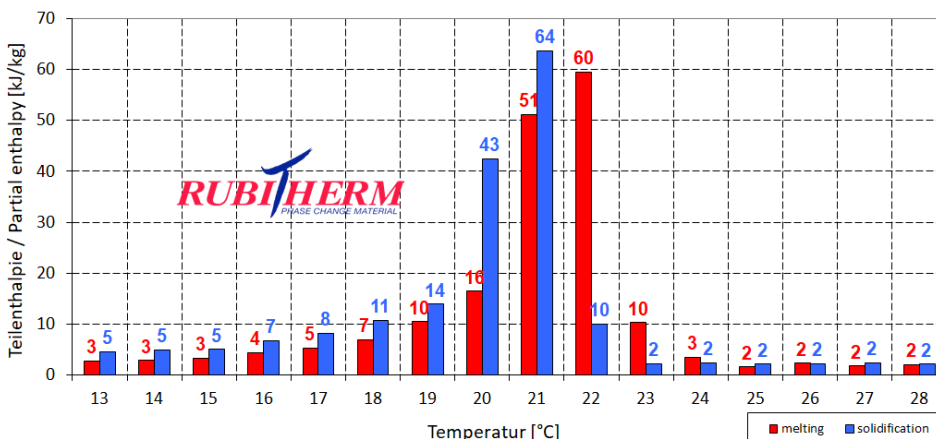
### The most important data:

Property	Typical Values	Unit
<b>Melting area</b>	<b>22-23</b> main peak: 22	[°C]
<b>Congealing area</b>	<b>21-19</b> main peak: 21	[°C]
<b>Heat storage capacity ± 7,5%</b> Combination of sensible and latent heat in a temperatur range of 13 °C to 28 °C.	<b>170</b>	[kJ/kg]
<b>Specific heat capacity</b>	<b>47</b>	[Wh/kg]*
<b>Density solid</b> at 15°C	<b>2</b>	[kJ/kg·K]*
<b>Density liquid</b> at 35°C	<b>1,5</b>	[kg/l]
<b>Volume expansion</b>	<b>1,4</b>	[kg/l]
<b>Heat conductivity</b>	<b>3-4</b>	[%]
<b>Max. operation temperature</b>	<b>~0,5</b>	[W/(m·K)]
<b>Corrosion</b>	<b>45</b>	[°C]
	corrosive effect on metals	



*Note: The product must be initialized (melt, homogenize and cool to 0 °C) once before use to achieve the specified properties. Many SP-product are hygroscopic and may absorb moisture if stored improperly. This can result in a change of the physical properties given.*

Beispiel / example: SP21EK Teilenthalpie / Partial enthalpy distribution\*



Rubitherm Technologies GmbH  
 Imhoffweg 6  
 D-12307 Berlin  
 phone: +49 (30) 7109622-0  
 E-Mail: info@rubitherm.com  
 Web: www.rubitherm.com

The product information given is a non-binding planning aid, subject to technical changes without notice. Version: 09.11.2020

*\*Measured with 3-layer-calorimeter.*