Data Sheet

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 used as macroencapsulated material. Densities of 1,0 kg/l and more can be achieved. This and all properties mentioned below make RUBITHERM® SP to the preferred PCM used in the construction industry. Both passive and active cooling can easily be realized e.g. air conditioners.
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 depenndig 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**

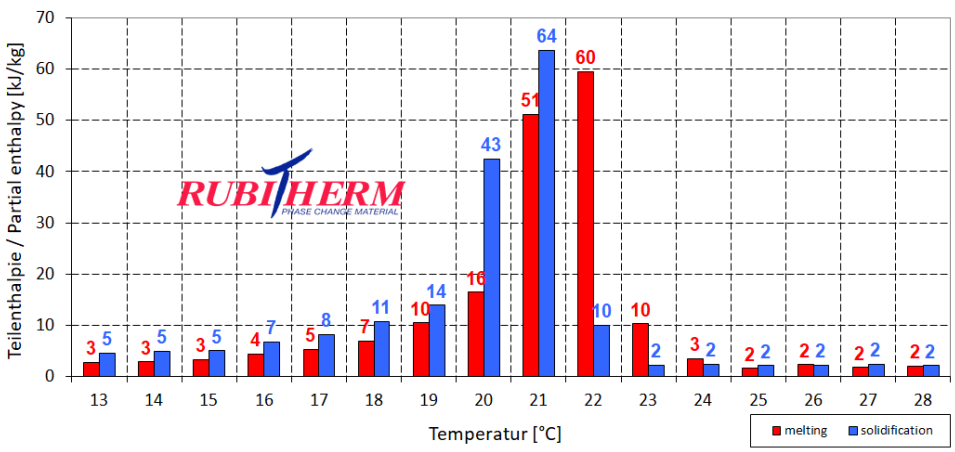
The most important data:

	Typical Values	
Melting area	**20-22** main peak: 22	[°C]
Congealing area	**21-19** main peak: 21	[°C]
Heat storage capacity ± 7,5% Combination of sensible and latent heat in a temperatur range of 13 °C to 28°C.	**165**	[kJ/kg]
	47	[Wh/kg]*
Specific heat capacity	**2**	[kJ/kg·K]*
Density solid at 15°C	**1,6**	[kg/l]
Density liquid at 35°C	**1,5**	[kg/l]
Volume expansion	**~6**	[%]
Heat conductivity	**~0,5**	[W/(m·K)]
Max. operation temperature	**45**	[°C]
Corrosion	corrosive effect on metals	

RAL QUALITY MARK
PHASE CHANGE MATERIAL
(≥ 10.000 cycles)

The product must be initialized (melt, homogenize and cool to 0 ° C) once before use to achieve the specified properties.
SP-products may absorb release water if stored improperly. This can result in a change of the physical properties given. Storing in closed containers mandatory.

Beispiel / example: SP21EK Teilenthalpie / Partial enthalpy distribution*



*Measured with 3-layer-calorimeter.

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