Data Sheet

SP-50

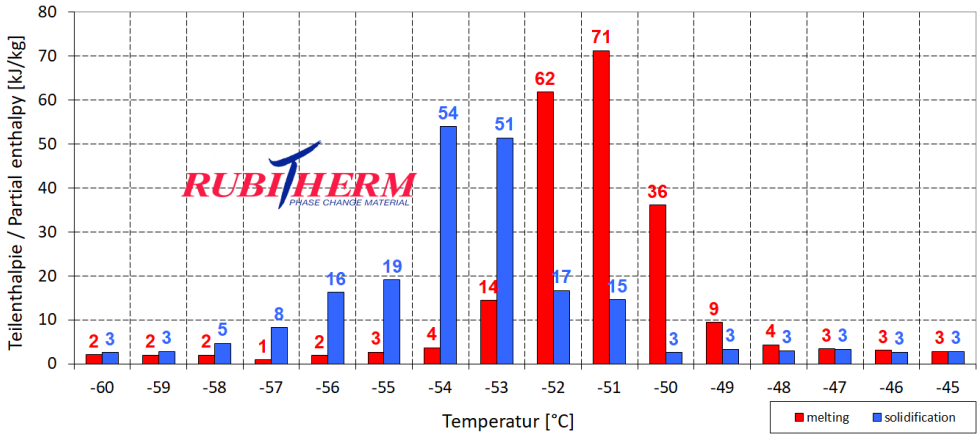
The creation of the latent heat material RUBITHERM® SP has led to a new and innovative class of low flammability PCM.
RUBITHERM® SP consists of a unique composition of inorganic components.
RUBITHERM® SP is preferably used as macroencapsulated material.
With melting points below 0°C these materials are ideal for temperature controlled transport of frozen goods.
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	**-50 <> -52** main peak:50	[°C]
Congealing area	**-52 <> -55** main peak:53	[°C]
Heat storage capacity ± 7,5% Combination of sensible and latent heat in a temperatur range of -60 °C to 45 °C.	**190**	[kJ/kg]
	54	[Wh/kg]*
Specific heat capacity	**2**	[kJ/kg·K]*
Density solid at -60°C	**~1,3**	[kg/l]
Density liquid at 20 °C	**~1,1**	[kg/l]
Heat conductivity	**0,6**	[W/(m·K)]
Max. operation temperature	**30**	[°C]
Corrosion	corrosive effect on metals	
Notes:	-60°C recommended for freezing	

Many SP-product are hygroscopic and may absorb moisture if stored improperly. This can result in a change of the physical properties given. Storing in closed containers mandatory.

Beispiel / example: SP-50 Teilenthalpie / Partial enthalpy distribution*



*Measured with 3-layer-calorimeter.

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