

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 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 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:

Melting area

Congealing area

Heat storage capacity ± 7,5%

Combination of sensible and latent heat in a temperatur range of -60°C to -45°C.

Specific heat capacity

Density solid

at -60°C

Density liquid

at 20°C

Volume expansion

Heat conductivity

Max. operation temperature

Corrosion

Notes

Typical Values

-50 bis -52 [°C]

main peak: 50

-52 bis -55 [°C]

main peak: 53

190 [kJ/kg]

54 [Wh/kg]*

2 [kJ/kg·K]*

~1,1 [kg/l]

~1,3 [kg/l]

3-4 [%]

0,6 [W/(m·K)]

30 [°C]

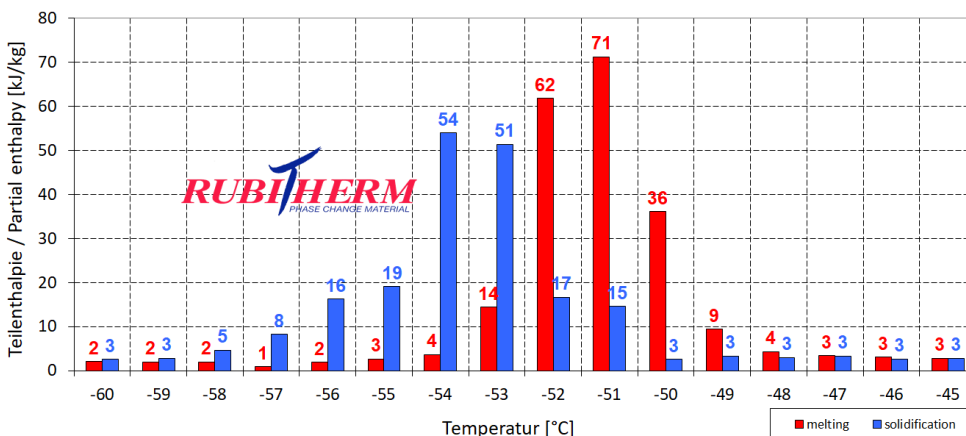
corrosive effect on metals

-60°C recommended for freezing

Note: 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: SP-50 Teilenthalpie / Partial enthalpy distribution*



*Measured with 3-layer-calorimeter

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