

## SP-21

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 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**

**Congeealing area**

**Heat storage capacity ± 7,5%**

Combination of sensible and latent heat in a temperatur range of -30 °C to-15 °C.

**Specific heat capacity**

**Density solid**

at -25°C

**Density liquid**

at 20 °C

**Heat conductivity**

**Max. operation temperature**

**Corrosion**

**Notes:**

Typical Values:

**-21 bis -19** [°C]

main peak:-21

**-21 bis -24** [°C]

main peak:-22

**285** [kJ/kg]

**80** [Wh/kg]\*

**2** [kJ/kg·K]\*

**~ 1,2** [kg/l]

**~ 1,1** [kg/l]

**0,6** [W/(m·K)]

**30** [°C]

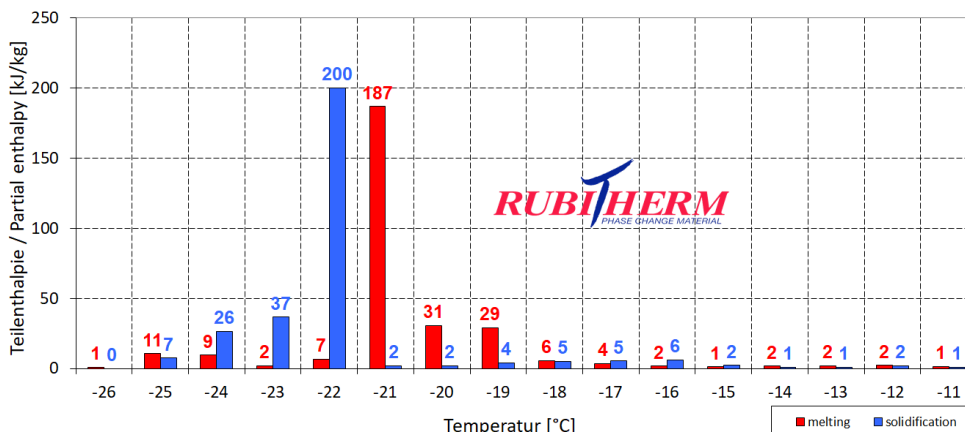
corrosive effect on metals

-25°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.

Beispiel / example: SP-21 Teilenthalpie / Partial enthalpy distribution\*



\*Measured with 3-layer-calorimeter.

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: 24.11.2020