

GR42

RUBITHERM® GR is a heat storage granulate which contains phase change material (PCM) within a secondary supporting structure, in this case a natural porous mineral particle. Used in thermal energy storage applications, the bound PCM melts and congeals, thus storing and releasing the latent heat associated with the phase change process.

In RUBITHERM® GR our patented mechanism ensures that the PCM, when in the liquid form, does not leak out of the granulate. The result is that the bound PCM is always a solid in its macroscopic form. Advantageous is that for many applications, large quantities of thermal energy can be stored and released at a relatively constant temperature, even when limited volumes and low differences in operating temperature are applicable.

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

Properties:

- heat storage and release take place at relatively constant temperatures
- bound PCM's exhibit little volume change during phase change
- operate without fluid materials, easy handling
- long life product, cycles rugged, easy handling
- melting temperatures range between -3 °C and 100 °C.
- various granulate sizes are possible



The most important data:

Melting area

Typical Values:
38-43 [°C]
Maximum: 41

Congealing area

43-37 [°C]
Maximum: 42

Heat storage capacity ± 7,5%
Combination of latent and sensible heat
in a temperatur range of 35°C to 50°C.

55 [kJ/kg]*
16 [Wh/kg]*

Specific heat capacity

2 [kJ/kg·K]

Bulk density

0,8 [g/cm³]

Heat conductivity

0,2 [W/(m·K)]

PCM content

30 [%]

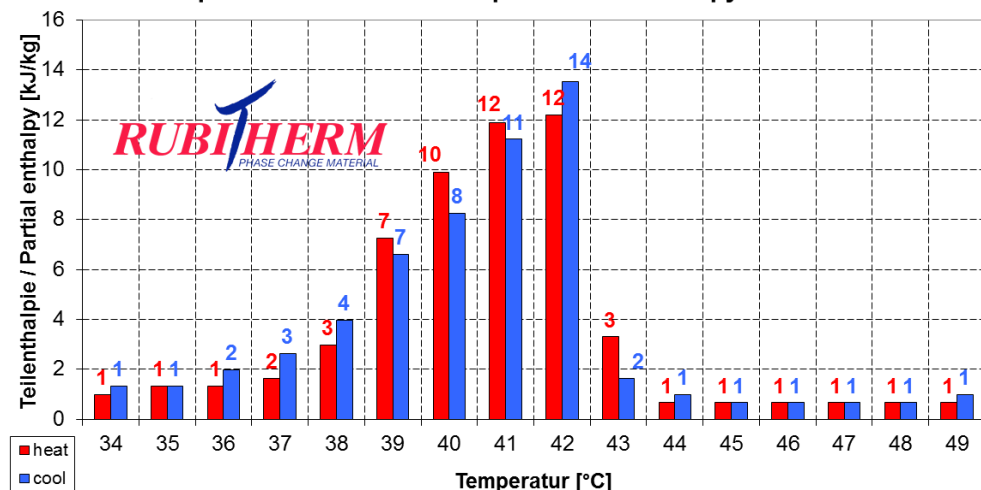
Flash point

190 [°C]

max. operation temperature

70 [°C]

Beispiel: GR42 1-3 Teilenthalpie / Partial enthalpy distribution



*Measured with 3-layer-calorimeter.

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