

## Thermal Resistance

Questions may arise when floor heating is combined with a synthetic (sports-)floor. Constructors or architects need to know the heat resistant value (Rc) of a Herculan (sports-) floor. The heat resistance is calculated by dividing the thickness of the floor by the thermal conductance. In case that 2 layers are installed upon each other (like in a sports floor the mat and PU), both values are calculated and added. The unit of Thermal Resistance is  $m^2 \cdot K/W$ .

The reciprocal value of thermal resistance is the thermal conductance (U) or  $1/Rc$ . The unit is  $W/m^2 \cdot K$ .

Underneath the Rc- and U-values of the most common Herculan flooring systems are mentioned.

Herculan Flooring System	Rc-value in $m^2 \cdot K/W$	U-value in $W/ m^2 \cdot K$
Herculan IG 250/251/351/381	0,01	100
Herculan MF 3+2	0.025	40
Herculan MF 5+2	0.035	28.6
Herculan MF 7+2	0.045	22.2
Herculan MF 9+2	0.055	18.2
Herculan MF 10+3	0,065	15.4
Herculan SR 10+4	0.07	14.3
Herculan MF Blue 28	0.04	25
Herculan MF Blue 33	0.045	22.2
Herculan MF Blue 38	0.05	20
Herculan XR 3+2	0.96	1.04

Other flooring systems to be calculated

### Conclusion:

Above mentioned Herculan Flooring systems are perfect to be used with floor heating.