

## Suitability with floor heating

### Introduction

A carpet reduces a floor's capacity to transport heat. In rooms with floor heating, a carpet will have an insulating effect and thus hinder room heating. The carpet's insulating effect, and thus its heat resistance, will depend on the construction and reverse side of the carpet.

### Definition

Heat transfer resistance is expressed by the unit:  $\text{m}^2 \times \text{C} / \text{W}$ , where

$\text{m}^2$  = square metre, C = temperature in °C, and W = Watt.

In the example  $0.17 \text{ m}^2 \times \text{C} / \text{W}$ , the unit means that it takes  $0.17 \text{ m}^2$  carpet to let 1 Watt through the carpet with a temperature difference of  $1^\circ\text{C}$  between the carpet's top and bottom side. In other words, the greater the resistance of the carpet, the greater the carpeted area needed to let 1 Watt through.

### Criteria of suitability

Experience has shown that most carpet types have a heat transfer resistance of between

$0.07$  and  $0.25 \text{ m}^2 \times \text{C} / \text{W}$

Carpets can be used in rooms with floor heating if the heat transfer resistance is less than

$0.170 \text{ m}^2 \times \text{C} / \text{W}$

Most carpets will be suitable for use with floor heating, except thick wool carpets and carpets with a thick foam backing, which insulate too much (= high heat transfer resistance). See the label for further information about specific products or contact egetæpper a/s.

### You can save on heating with a carpet !

This is not due to the carpet's heat insulating property, but because a carpet's heat conductivity is less than that of a hard floor. Put another way: carpets draw less heat from your feet than a hard floor - which makes carpeted floors warmer to walk on.

This means that a carpet does not draw warmth from your feet as quickly as a hard floor, which is why a carpet feels warmer. Heat conduction is higher on a hard floor.