

Basotect® Innogration GmbH

Basotect® sound absorbers in thermoactive prefabricated concrete ceilings

A thermoactive concrete ceiling has many advantages: first, it is a design feature in modern buildings, and, second, it helps to regulate heat, ensures energy-efficient cooling and heating and can help to make the buildings eligible for passive house certification. One potential downside to thermoactive concrete ceilings is that long reverberation times caused by the sound-reflecting quality of such a hard, smooth surface mean poorer room acoustics. Typical solutions to long reverberation times, such as acoustic absorbers, subsequently placed for sound absorption can have an effect on the convection of air needed and therefore on the efficiency of the cooling and heating capacity.

The solution is to have acoustic absorbers integrated directly into the ceiling elements themselves that enable excellent sound absorption and at the same time do not have any adverse effect on the functionality of the ceiling. The company Innogration GmbH uses BASF's Basotect® melamine resin foam in its new Ceiltec® thermoactive prefabricated concrete ceiling. Basotect® is integrated in the recesses in the Ceiltec® prefabricated ceiling. Even a small coverage of the ceiling (10-15 %) produces a significant reduction in the reverberation time in the room.

Basotect® is a very versatile foam, and, because it is non-flammable, it is also an important material for fire protection in modern buildings. As it has an extremely low density (9 kg/m³) and does not contain mineral fiber, Basotect® can be fitted in the concrete ceiling very easily and safely.

Several office and administration buildings already enjoy the benefits of Ceiltec® ceilings with Basotect®: Examples include the Smarthouse in Munich, the Kreativpark office building in Karlsruhe and the Heidger Institute in Osann-Monzel on the Mosel. In October 2015, this institute played host to the workshop entitled "Cooling, heating and acoustics in modern office environments" for architects and planners where the participants were able to see the pleasant room acoustics and the compatibility of design and functionality for themselves.



Fully integrated, thermally active ceiling Ceiltec® from Innogration GmbH with strip absorbers made of Basotect®.