Gypsum-containing construction material compounds

The present invention relates to gypsum-containing construction material compounds and to the use thereof for example as tile adhesives or self-leveling compounds.

Gypsum is a mineral binder, available inexpensively in large quantities for construction material compounds, and is obtainable with much less energy consumption in comparison to cement, in particular. The reason is that, in addition to naturally occurring gypsums, there are considerable quantities of gypsum obtained from flue gas desulfurization plants, and there is interest worldwide in using such gypsum. Consequently there is a great will to replace the energy-intensive material that cement represents by the less energy-intensive gypsum, and, in so doing, to reduce the overall energy consumption in the construction sector and thereby to make a contribution to more environmental building. A disadvantage of gypsum is its sensitivity to water, which causes edifices based on gypsum-containing construction material compounds to lose strength under humid or wet conditions. This deficiency is exacerbated by freeze/thaw exposure. To date, therefore, the range of application of gypsum in the construction sector has been considerably limited, and has focused essentially on the interior segment.

In order to adapt gypsum for use in the exterior segment, or even the wet segment, therefore, additional measures are needed. For this purpose, proposals have included the addition of hydrophobizing agents to gypsum-containing construction material compounds. Thus, for example, DE-A 3704439 proposes the use of silicones and siloxanes, stearates and paraffin waxes. The teaching of US 2002/0040666 is to apply organopolysiloxanes to organic or inorganic supports and to incorporate them in this form into gypsum-containing construction material compounds. US 5437722 describes water-resistant gypsum products comprising paraffin, montan wax and polyvinyl alcohol as additives. EP-A 320982 discloses the use

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