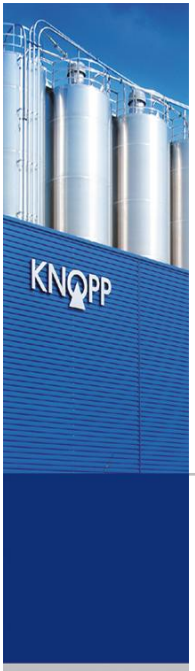

KNOPP
Adolf-Oesterheld-Str. 1
D-97337 Dettelbach
Tel: +49(0)9324/9199-0
Fax: +49(0)9324/9199-66
www.knopp-chemie.com

CONTOPP® Screed additives

Information sheet 14:
Building material class and fire resistance class

In principle, the fire resistance or fire resistance class of an entire building component must be distinguished from the fire behavior of the building materials that comprise it.

Cement screed mortar, as a building material based on CONTOPP® screed admixtures, offers optimal fire protection requirements because it is considered a non-combustible building material within the meaning of DIN 4102. This standard divides building materials into building material class A: non-combustible building materials, with subclasses A1 (must not ignite at any time). Therefore, DIN 18560-1 also assigns cement screed mortar to the highest requirement class A1 (Afl): non-combustible.

The classification of building components is regulated in DIN 4102 Part 2. A distinction is made between fire resistance in minutes (30, 60, 90, 120, and 180 minutes), and between load-bearing and non-load-bearing components. The number indicates the fire resistance duration determined during testing in minutes, rounded to the nearest divisible by 30. For multi-layer components such as floor constructions, the fire resistance class depends on the building material and thickness of the supporting layer, as well as the building material class of the insulation layer. Therefore, a definitive assessment of the fire resistance class of the floor construction can only be made after knowledge of all building materials and dimensions used. When considering the fire resistance class of a cement screed on mineral wool or expanded perlite insulation alone, DIN 4102 provides the following general information:

Fire resistance class	Insulation	Screed thickness (*)
F30-A, F60-A, F90-A	Mineral wool insulation materials according to DIN EN 13162 (bulk density ≥ 30 kg/m³) or expanded perlite insulation materials according to DIN 13169 (bulk density ≥ 130 kg/m³)	≥ 25 mm (**)
F 120-A		≥ 30 mm
F 180-A		≥ 40 mm
(*) For further construction details, please refer to DIN 18560-2. (**) According to DIN 18560-2, floating screeds must be installed with a minimum thickness of ≥ 30 mm.		