

Guidelines for Placement of Cemfloor Screed during Hot Weather.



Introduction

Cemfloor screeds are cement based flowing screeds and therefore care must be taken during placement in summer months when the temperatures can rise above 25°C.

European standards stipulate (EN8204 Part 7:2003 section 7.2.2 - temperature) that the temperature of both the base slab and the air in the area that concrete or screed is to be installed should always remain in the range 5°C to 30°C. This applies to the period of time that the material is being installed and also subsequently for at least 72 hours. NHBC regulations 2017 (section 9.3.4) also advise that concrete and screed should not be installed during weather conditions which could adversely affect the finished construction.

Hot weather conditions are usually caused by a combination of factors (some or all) including high ambient temperature, high solar radiation, low relative humidity and high wind velocity.

However infrequent, hot weather conditions can impact on Cemfloor, both in the fresh and hardened state.

Potential Problems in Hot Weather - Fresh Cemfloor

- Increased water demand.
- Increased loss of workability with the tendency to add water at the job site.
- Increased rate of setting and hardening, resulting in difficult handling and finishing.
- Increased potential for plastic shrinkage cracking.
- Difficulty in controlling entrained air content.

Potential Problems in Hot Weather - Hardened Cemfloor Screed

- Potential decrease in 28 day and later age strengths.
- Increase in drying shrinkage and thermal cracking.
- Increase in permeability.
- Reduction in durability.
- Difficulty in controlling entrained air content.

Temperature

Two different temperatures need to be considered when working with cemfloor in hot weather; i.e. that of the ambient air temperature and the cemfloor screed itself.

1. Air Temperature:

Ambient temperatures up to about 20°C should not, on their own, cause significant problems, especially in damp or humid conditions.

Ambient temperatures of 20°C and above, allied to low humidity and drying winds, require care during placement.

Thermal shock may result from rapid drops in the temperature of exposed cemfloor screed e.g. when cemfloor is placed on a hot day followed by a cool night.

2. Cemfloor Screed Temperature:

EN 206 requires that the temperature of concrete on delivery shall not be more than 30°C. Cemfloor temperature at placing is generally considered to be in the order of 5°C above mean ambient temperature (Ref. CIRIA C660).



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