TECHNICAL FLOORING DATASHEET
08

Technical Note
Curling of Floors – September 2026

Curling or warping of the floor is the phenomenon where the perimeter of the concrete slab curls upwards. It is noticeable due to the top surface of the concrete slab being at a higher level than the screed rail which it is was cast against as shown in figure 1.

Photo below –
Figure 1.0 – curling of concrete slab at perimeter



The phenomenon occurs due to a lack of adequate curing provision especially during warm/hot and/or windy weather, low humidity conditions and is exacerbated by the high cement content of some types of concrete, which increases the heat of hydration during curing. As the concrete topping is relatively thin, typically 75mm thick compared to concrete framed buildings, typically 250mm thick, there is a larger temperature gradient across the slab thus resulting in the top surface curing at a faster rate than the bottom surface resulting in contraction of the top layer. As this occurs at an early age it can be reversed by the application of water, or rainfall. Correct concrete mix design is necessary as is the need to avoid adding water to the fresh concrete to increase its workability.

It is important not to ignore the phenomenon as it can lead to vibrational issues for the homeowner when using a washing machine or when walking over the floor. If the concrete topping does curl upwards, then a void will be present in the floor which does not offer any damping effect to sources of vibration.

In the unlikely event that a void is formed its presence can be investigated by removing the washing machine and core drilling a small hole through the concrete topping. If a void is present, it can be back filled with a non-shrink grout. Depending on the length of the perimeter additional core holes may need to be formed to ensure the non-shrink grout flows along the full perimeter void. Once cured there should be a noticeable reduction in the vibration response of the floor.

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