



TECHNICAL BULLETIN – TB160

ARDEX LEVELLING COMPOUNDS AND WEAR SURFACE PRODUCTS OVER HEATED SUBFLOORS

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INTRODUCTION & SCOPE

Traditionally, heated cementitious subfloors have been associated with situations such as tiled wet areas or floors covered with resilient or textile floor coverings. Applying levelling compounds over heated subfloors extends this practice and has succeeded with cable and mat heating systems. As with the actual heated concrete floors, these smoothed floors are 'hidden' beneath a floor covering.

With the advent of levelling compounds specifically intended for use as wear surfaces or feature floors, inquiries have been received concerning using these wear products on heated substrates. This bulletin discusses the issues surrounding this application.

WHICH ARDEX SMOOTHING CEMENTS ARE INVOLVED?

ARDEX has three primary levelling compounds used as wear surfaces and a number of secondary products that may be used in this area.

The primary smoothing cements are ARDEX K80 or Ardex K301,

ARDEX K80 and ARDEX K301 do not carry any visual appearance guarantees.

WHAT ARE THE ISSUES?

The primary concern with these exposed floors is the development of hairline cracking, which mirrors the heating cables. These cracks develop either due to strains around the heating/cooling element or as a result of limited bond development between the cement and the plastic coil sheafing. The hairline cracking appears on the floor surface and becomes more marked where the floor is sealed. Whilst these cracks do not affect the floor's performance, they are a significant aesthetic issue.

Embedding the elements in a base coat of levelling compound, which is subsequently over-coated with the wear product does not prevent the problem from occurring.

Metal reinforcing mesh is not recommended to prevent cracking due to potential problems with securing the mesh to the subfloor and the damage it could cause to the heating system. An alternative is to use unbonded fibre-glass mesh, but this has not been evaluated for suitability. Note that mesh within the wear surface coating will develop mesh ghosting on the surface.

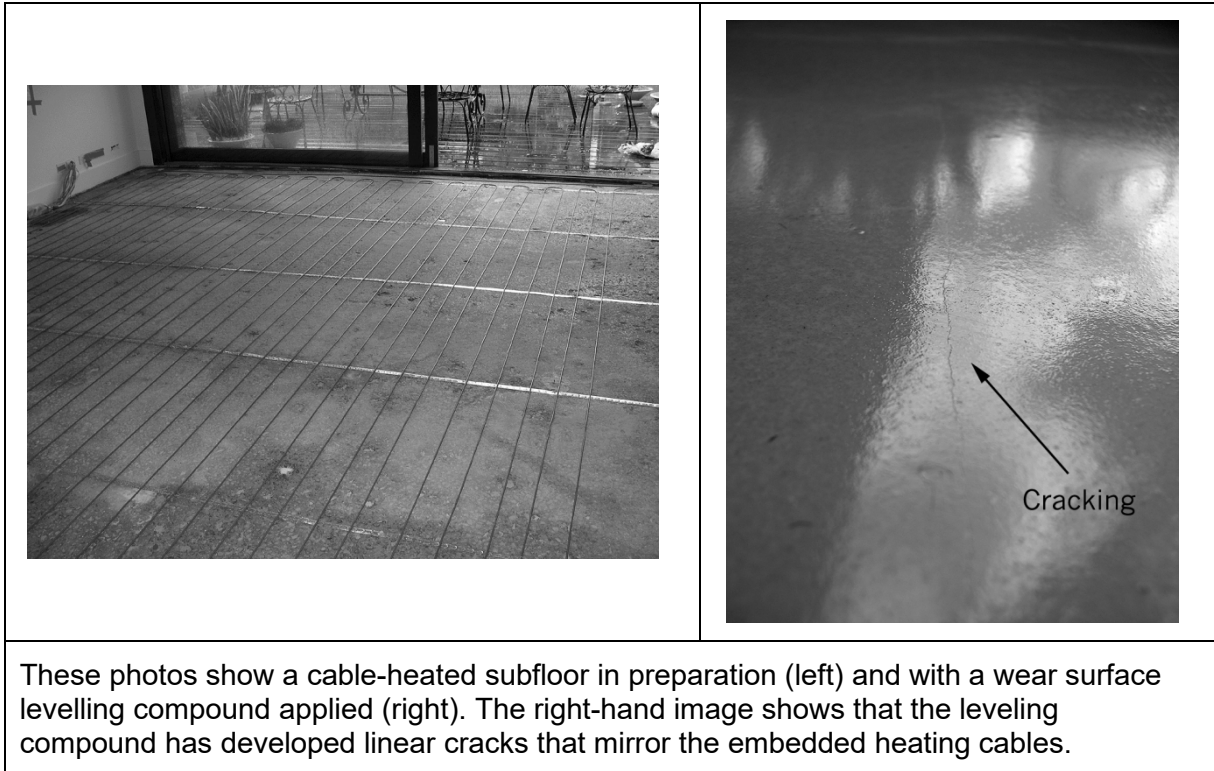
ARDEX RECOMMENDATION

ARDEX does not recommend the use of smoothing or feature floor products as wear surfaces directly over subfloors that have exposed electrical cable/mat heating systems or piped water heating on top of the substrate.

It is acceptable to place the wear surface on top of the heating where it is installed in the slab itself or embedded in a 45mm thick Ardex A38 base screed.



Refer to ARDEX Technical Bulletin TB029 for permitted installations with heated subfloors. The acceptable use of levelling compounds with cable or mat heating are only where the levelling compound acts as a underlayment for a floor covering. Acceptable floor coverings are resilient flooring, textile or carpet coverings, ceramic tiles and floating timber, but not a coating or sealer.



These photos show a cable-heated subfloor in preparation (left) and with a wear surface levelling compound applied (right). The right-hand image shows that the leveling compound has developed linear cracks that mirror the embedded heating cables.

IMPORTANT

This Technical Bulletin provides guideline information only and is not intended to be interpreted as a general specification for the application/installation of the products described. Since each project potentially differs in exposure/condition, specific recommendations may vary from the information contained herein. For recommendations for specific applications/installations, contact your nearest ARDEX Australia Office.

DISCLAIMER

The information presented in this Technical Bulletin is to the best of our knowledge true and accurate. No warranty is implied or given as to its completeness or accuracy in describing the performance or suitability of a product for a particular application. Users are asked to check that the literature in their possession is the latest issue.

REASON FOR REVISION-ISSUER

Change of slogan and address

DOCUMENT REVIEW REQUIRED

36 months or whenever third-party suppliers change their recommendations.

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