MAPEHEAT CABLE

Installation Guide

MAPEI

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GENERAL INFORMATION

- Check that delivered material matches the delivery note.
- Read through the instructions completely before you begin the installation work.
- The installation of heating cables must comply with the safety regulations, restrictions and national electrical rules for the country.
- For guidance on floor construction in regards to the construction materials, structures, building regulations and floor covering – follow the material manufacturer's instructions.
- Measure the insulation resistance and resistance of the heating cable. Insulation resistance value should be at least 100 MΩ and heater circuit resistance value in accordance with the resistance (R) in the design table. All these measurement values should be recorded continuously in the intended field in the installation protocol. Remember to make a sketch of the installation.
- The heating cable may be fitted directly to a suitable non-flammable subfloor (e.g. sand/cement screed, concrete or insulation board) and they may only be laid in such way that they are not subjected to mechanical stress.
- The minimum temperature during installation is +5°C.
- The heating cable must not be cut or shortened.
- The heating cable must not be crossed over itself or lie gathered in the same place.
- The minimum bending radius for the heating cable is 30 mm.
- The heating cable may not be installed under fixed furniture and the heated floor must not be covered with a thick carpet or insulation that might risk overheating the cable.
- The heating cable must not pass through thermal insulation or crossing expansion joints.
- The heating cable must be installed in a medium of equal thermal conductivity.
- The joint between the cold lead and heating cable must be installed in the same medium as the heating cable and must

not be positioned in the protective conduit. Handle the joint with care, i.e. do not bend or pull the joint and it must not be drawn up into the protective pipe. Secure the joint against the subfloor or reinforcement.

- The thermostat sensor should be placed in a protective conduit in the floor between two cable runs. Remember to seal the ends of the protective conduit, so that the levelling smoothing compound or tile adhesive does not get into the tube. This allows the thermostat's sensor to be changed if necessary.
- Information of the installation has to be kept visible at the electrical distribution board.
- To ensure electrical safety earth leakage circuit breakers of max 30 mA shall be used.
- Determine the required heater spacing between the cables for the required power output; see the design table in this document. Use the following formula to calculate the appropriate spacing:

$$\text{Spacing (mm)} = \frac{\text{installation area (m}^2\text{)}}{\text{cable length (m)}} \times 1000$$

- Measure the insulation resistance and resistance of the heating cable:
  - Before heating cable installation
  - After heating cable installation
  - After application of levelling/smoothing compound
- Insulation resistance shall be at least 100 MΩ. The supplier cannot be held responsible for claims that should have been discovered at this stage. Resistance value (R) - see the design table in the Mapeheat Commissioning Report (can be found at www.mapei.co.uk/mapeheat).
- All these measurement values should be recorded continuously in the intended field in the installation protocol. The installation protocol should also include a dimensioned sketch or photo of the installation.

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The heating cable is designed for installation in a layer of a suitable Mapei levelling compound or tile adhesive ensuring that the system is a minimum of 3mm below the surface. Some floor coverings will require deeper installations of levelling compound. Always check with floor covering supplier.

The cable output is approx. 12 W/m.

The minimum spacing for the heating cable is 80 mm.

The maximum installed output for the heating cable installation is 150 W/m^2.

INSTALLATION OF THE HEATING CABLE

1 Start the installation of the heating cable and secure the joint between the cold cable and the heating cable against the subfloor or reinforcement.

2 Roll out and place the heating cable with designed spacing.

3 Fasten the heating cable to the subfloor construction in such way that the cable is not subjected to mechanical stress. Fix the cable with a distance of approx. 0.25-0.30 m. Do not install the heating cable under surfaces where holes will be made, e.g. for water closets, or under fixed furniture. Place the heating cable at least 50 mm from the wall so that fastening of possible

skirting boards cannot damage the heating cable.

4 All the heating cable must be installed within the floor as it cannot be cut or shortened. Make adjustments of the cable spacing when necessary.

5 Place the thermostat sensor in a protective conduit between two adjacent cable runs.

6 For information about the thermostat – follow the supplier's instruction.

7 Control that the heating cable does not cross over itself.

8 For information about floor construction such as primer/ filler/protective layer/grout/joints/floor covering – follow the supplier's instructions.

9 Connect the heating cable to 230 V supply if the measured values are correct.

Note: The floor heating should not be switched on in a controlled manner for at least 7 days after the completion of the installation of ceramic, porcelain and natural stone, or 48 hours when resilient and wooden floor coverings are installed.

CONSTRUCTION DRAWINGS

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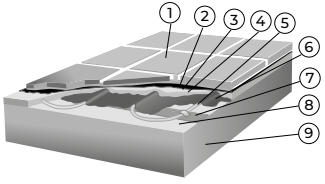
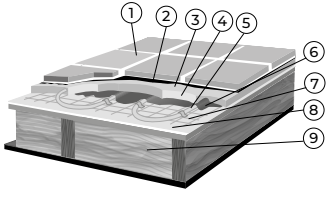


1. Top flooring tiles/wood or laminate
2. Tile adhesive (when applicable)
3. Watertight barrier (when applicable)
4. Suitable Mapei levelling compound
5. Heating cable
6. Suitable Mapei primer
7. Fixing strip or Mapei Mapeheat Membrane
8. Cement floor structure
9. Thermal Insulation



1. Top flooring tiles/ wood or laminate
2. Tile adhesive (when applicable)
3. Watertight barrier (when applicable)
4. Suitable Mapei levelling compound
5. Heating cable
6. Suitable Mapei primer
7. Fixing strip or Mapei Mapeheat Membrane
8. Load-bearing subfloor
9. Thermal Insulation

WARRANTY

Mapei offers a 12 year Warranty for **Mapeheat Cable**. Please check the Warranty Certificate and Registration Form (included in the Commissioning form or downloadable from www.mapei.co.uk/mapeheat) for more details. The commissioning form has to be fully filled out during the installation and approved by a qualified electrician. The commissioning form should be kept by the owner of the building in order to comply with electrical regulations and the Warranty conditions. Proof of purchase must be kept and available to view at the initiation of any claim against warranty for **Mapeheat Cable.**

NOTES

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TECHNOLOGY FROM

nVent RAYCHEM

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MAPEI WORLD LONDON CITY
6 Great Sutton Street
Clerkenwell
London
EC1V 0BX
020 3302 9610
clerkenwell@mapei.co.uk

MAPEI UK LTD
Mapei House
Steel Park Road
Halesowen
West Midlands. B62 8HD
0121 508 6970
info@mapei.co.uk