## (2) MAP ${ }^{\prime}$

## Wapeheat

## Lead WIre Repalt [G]3

For Cold Lead Damage to Mapeheat Mat and Mapeheat Cable

## DESCRIPTION

Mapeheat Lead Wire Repair Kit contains all materials needed to repair a damaged cold lead for Mapeheat Cable, Mapeheat Mat standard sizes or Mapeheat Mat custom sizes. The kit is available in 120 V and 240 V versions.

The repair kit's voltage ( 120 V or 240 V ) must match the voltage of the damaged cold lead.

## BEFORE YOU START

Repair Kit components

- 1 lead wire ( 10 feet or 3.05 m )
- 3 long solder sleeves
- 3 short solder sleeves

Note: Short solder sleeves are used when connecting the heating wire of Mapeheat Mat or Mapeheat Cable to the cold lead wire.

## - DO NOT CONNECT MAPEHEAT MAT OR MAPEHEAT CABLE TO POWER DURING TESTING.

## HOW TO TEST

## Insulation test

To ensure that the copper conductors are fully insulated: Acquire a digital ohmmeter or multimeter with alligator clips or an equivalent testing device. Place one meter probe on the grounding outer metallic braid and the other probe on the copper wire inside the white/red lead.


- $\quad$ Confirm that the reading is infinity or open line (oL).

Repeat these steps to check the reading between the metallic braid and the copper wire inside the black lead.

## Resistance test

To ensure heating continuity in your Mapeheat Mat or Mapeheat Cable: Acquire a digital ohmmeter or multimeter with alligator clips or an equivalent testing device. Set the meter to the lowest setting. Place one of the meter probes on the copper wire in the white/red lead and the other probe on the copper wire in the black lead.


- Confirm that your ohm reading is within
$-10 \%$ or $+5 \%$ of the factory reading listed on the tag of Mapeheat Mat or Mapeheat Cable.

Record the reading in the Resistance Testing Log.
Note: Mapeheat Mat and Mapeheat Cable must be tested before, during and after installation to validate the warranty.

## HOW TO INSTALL THE REPLACEMENT LEAD

Repeat the following steps for each lead wire (black and white/red).

1. Cut $1 / 8$ " $(3 \mathrm{~mm})$ in front of the damaged portion to ensure that no damaged wire remains on the good lead. Remove the UL tag from the damaged cold lead, set the UL tag aside and discard the damaged cold lead.*
2. THE FOLLOWING STEP ONLY APPLIES TO MAPEHEAT CABLE: Remove $3^{\prime \prime}(7.6 \mathrm{~cm})$ of the black outer jacket of the remaining cold lead.
3. Push back the copper braiding from the wire on the remaining cold lead to expose about 3 " ( 7.6 cm ) of insulated wire.
4. Very carefully strip $1 / 8^{\prime \prime}(3 \mathrm{~mm})$ of insulation from the end of the old lead wire.
5. Take the new lead from the repair kit.
6. Take one short solder sleeve from the repair kit and place it over the new piece of lead wire.
7. Overlap $1 / 8$ " ( 3 mm ) of the bared wire ends of the old lead wire and the new piece of lead wire.
8. Carefully slide the short solder sleeve over the overlapping ends, ensuring that the solder ring is centered over the overlapping bare wires. Make sure that the wires are within the solder sleeve seals (the blue and clear bands).
Note: Keep the metal braid at least 1 " $(2.5 \mathrm{~cm})$ away from the solder sleeve during the heating process to prevent a short between the wire and the metal braiding.
9. With the heat gun, heat the solder sleeve until the solder ring melts on the overlapping connection and the plastic tube is shrunk tight around the insulation, protecting the wire. Heat the ends of the solder sleeve first to seal in the solder.
10. Repeat steps 6 to 9 for the other lead.
11. Pull the bunched copper braiding over the repaired wire connections. Slide the long solder sleeve over the overlapping ends, ensuring that the solder ring is centered over the overlapping copper braid ends.
12. With the heat gun, heat the solder sleeve until the solder ring melts on the overlapped connection and the plastic tubing is shrunk tight around the steel braiding.
13. After finishing the repair, conduct insulation and resistance tests.

* The UL tag contains useful information for future warranty and inspection purposes. Ensure that the UL tag is left with the homeowner or accessible in the junction box.

For details, call MAPEI Technical Services at
1-800-992-6273 in the USA or 1-800-361-9309 in Canada.

For information on MAPEl's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

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Edition Date: January 22, 2020
MK 3000364 (19-3087)

