

# GMH 38xx: Measurements on insulation materials (e.g. glass/rock wool, building foam, cellulose insulation)

Due to the high electrical insulation capacity and the loose, easily compressible or very different structure (no reproducible density!) of most insulation materials, exact measured values can unfortunately not be measured. Especially in dry material only unstable measured values are visible, which can be falsely interpreted as measured values.

However, if stable measured values above 12% (setting: characteristic curve . rEF) can be read, it can be said with good certainty that the measured building material is soaked. In most cases, this is sufficient for assessing the condition or searching for construction defects.

Caution: Conductive coatings (e.g. aluminum laminations) must not short-circuit the electrodes (device operates according to the resistance measuring principle). Remove these at least 1cm around the puncture points, or take other measures to insulate the electrodes in the area of the coating (additionally insulate electrodes or similar).

Please note that a good contact to the material must be given during the measurement. This can be achieved, for example, by first piercing to the desired depth and then pressing the electrodes laterally (transverse to the piercing direction).

The temperature measurement plays no role in this assessment of moisture penetration

By the way: Even capacitive measuring instruments, such as the GMI15 plus or GMK 100/GMK 210, cannot measure exact values with these materials. Here, the displayed value depends to an even greater extent on the density of the measured material than when measuring according to the resistance principle.

## Recommended equipment:

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|---|---------------------------|
| • GMH 3831 or GMH3851                     | Measuring device          |
| • GMK38                                   | Measuring cable           |
| • GSG38 (before 2021-11: GSG91)           | Electrode with handle     |
| • GMS 300/38 (before 2021-11: GMS 300/91) | Measuring rods 300mm long |