ELTECPUR® rail

Insulation Film

SELF-ADHESIVE POLYMER-BITUMEN SEALING STRIPS FOR THE INSULATION OF RAILS AND TRACK SYSTEMS.

The requirements for stray current insulation in accordance with the EN 50122-2 standard specify a maximum conductance of 2.5 S/km or a minimum resistance of 0.4 Ohm·km for closed lines. HET rail insulation systems easily fulfil these specifications and achieve impressive values of around 3.4 * 10^{-3} S/km in the laboratory, which corresponds to a resistance of almost 300 Ohm·km. In practice, however, the values achieved on site can be influenced by installation inaccuracies or disruptive factors such as points, water boxes and axle counters, leading to deviations from the laboratory measurements. Despite these challenges, HET has established itself as a reliable partner in the field of rail insulation through numerous field measurements.

In recent years, the demand for higher electrical resistance values has emerged, particularly from Anglo-Saxon countries, with requirements of up to 100 Ohm·km. HET has responded to these developments and looked for new solutions. While insulating paints were initially favoured, practical challenges arose: Applying the coating proved to be time-consuming and difficult, particularly due to strict safety requirements and potential damage during transport.

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To meet these challenges, HET developed the ELTECPUR® rail Insulation Film – a state-of-the-art insulation film inspired by applications in the gas industry, where similar films are used to insulate pipes. The first laboratory tests were extremely successful, with impressive values of over 0.32 * 10^{-6} S/km or 3.13 * 10^{6} Ohm·km. These results underline the performance of the new insulation film and open up a new era in rail insulation.

HET rail insulation systems in combination with the newly developed ELTECPUR® rail Insulation Film enable maximum electrical insulation of the rail and thus effective protection against harmful stray currents.

Thanks to its easy application and self-adhesive properties, ELTECPUR® rail Insulation Film can be installed either on site or in the workshop without any additional safety measures or tools. Minor corrections or repairs can be made to the ELTECPUR® rail Insulation Film at a later date without any effort. Measurements on rails insulated with ELTECPUR® rail Insulation Film and encapsulated with the ELTECPUR® rail Multi-part System have shown specific resistance values of over 90,000 Ohm·km in practice. The Insulation Film thus creates completely new possibilities for local transport. A worldwide patent has been applied for the ELTECPUR® rail Insulation Film.

Our brochures and information material are intended to advise to the best of our knowledge, but the content is not legally binding. Subject to technical changes without notice.

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