

## Cinemagnum in Nuremberg

Cinema lovers know Nuremberg as the city with what was, until 2010, Europe's largest IMAX cinema - now known as CINEMAGNUM. This cinema complex located on the eastern edge of the city centre has 21 screens and a total of approximately 5,000 seats. If you look for a large, modern building on the skyline of Nuremberg city centre, however, you will not to find it. The cinema is almost hidden underground. Architect Detlev Schneider designed the cinema complex to fit into what was then - at a depth of 35 metres - Germany's deepest construction site in Nuremberg. The complex is surrounded by historical buildings, with only its relatively small, glass-facade entrance hall visible from the outside.

This cinema on the banks of the Pegnitz river, which passes through the city, uses a mobile dome with a diameter of 27 metres to give viewers a screen measuring approximately 1,000 m<sup>2</sup>, the largest in Germany. To make sure every visit is an unforgettable event, the CINEMAGNUM has combined its huge screen with an excellent surround-sound digital sound system, providing optimal, crystal-clear sound for the films.



Sound absorption was therefore of great importance during the construction of the underground car park above the cinema. The idea was to minimise the structure-borne noise from vehicle and pedestrian traffic penetrating the cinema construction. The tried-and-trusted floor insulation material **Regupol® BA** - a PU-bonded rubber fibre strip used to reduce footfall noise, approved for use as a construction material – solved this problem.

The structural side of the project was supervised by the Nuremberg engineering company Wolfgang Sorge. The company decided to use **Regupol® BA** because it has a high pressure stability of up to 50 kN/m<sup>2</sup>, low deflection and deformation properties and a high shear strength, making it eminently suitable for the requirements of this unusual construction project. Insulation was difficult, mainly due to the rolling load associated with the operation of the underground car park. The material is not only subject to vertical stress, but also to lateral acceleration such as when cars brake, drive off and turn. **Regupol® BA** has been used for numerous, equally complex projects, in which it has proven to withstand such stresses. Its sound insulation values remain constant in the long term, as the material consistency is not significantly changed by constant and periodic exposure to short-term loads.



Thanks to all these properties, sound insulation has remained effective under these extreme conditions - an underground car park with high peak loads located above acoustically sensitive cinemas. In the same way, the floor construction with its surfaces insulated with elastic material has remained stable in the long term. The construction project was completed in 2001.

**A BSW product**Floor insulation **Regupol® BA**

- PU-bonded rubber fibre rolls
- Dimensions 10,000 x 1,250 x 17 mm
- Temperature resistance from -20°C to +80°C
- Sound reduction 26 dB
- Compressibility 2.0 mm
- Maximum traffic load up to 5,000 kg/m<sup>2</sup>
- Fire class B 2 / Class E



Additional references are listed on our website.

[www.bsw-vibration-technology.com](http://www.bsw-vibration-technology.com)

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