



## Municipal works in Bonn are modernizing trams with specialty foam Basotect® G

### Case Study

#### Bonn residents will travel more comfortably with Basotect®

Basotect® is going to be used in Bonn's trams to provide effective sound absorption and thermal insulation. In a large-scale project, the municipal works of the city in Western Germany will be modernizing 25 old trams over the next few years. "The prices of new vehicles have risen rapidly in recent years," explains project manager Alexander Wingen from Bonn's municipal works. "But our old trams are still structurally sound. This is why we have decided to convert them and equip them with the very latest technology."

#### For greater comfort in public transport

For the purpose of providing the trams with sound insulation, the municipal works chose Basotect®. Thanks to its fine, open-cell structure, the BASF foam is very good at absorbing the reverberation which is caused by multiple reflection of sound on surfaces. This lowers the level of noise within the vehicle, and vibrations are also reduced meaning that passengers can travel in a quieter and more comfortable environment. As a result of its low thermal conductivity, the material also guarantees good thermal insulation. Moreover, the lightweight foam, which weighs just 9 kg/m<sup>3</sup>, helps to reduce the overall weight of the vehicle.

#### On site processing

"Another advantage of Basotect® for us was that it is very easy to process without producing any dust," says Wingen. "This was important to us because we have created a special workshop in which we will gut the vehicles and completely modernize them. This means that we can cut the material to the exact size required on site using our own cutting tools." The company Hanno from Hanover, Germany, is supplying Basotect® panels to Bonn's municipal works. Each of the vehicles will be clad with around 150 m<sup>2</sup> of the Basotect® G/G+ grade in a thickness of 3 cm.

In the driver's cab, the foam will be laminated with an additional aluminum sheet. The municipal works are able to renovate three vehicles in their workshop each year. The intention is that the first fully modernized tram is to run in the Rhein-Sieg district in 2012.

#### Versatile Foam

Due to its favorable combination of different properties – temperature-resistant and flame-retardant, as well as lightweight, elastic, sound-absorbing and heat-insulating – Basotect® can be used to provide acoustic and thermal insulation for buildings, cars, trains and aircraft. The specialty foam by BASF is available in several versions and for different applications.

