

# DAMTEC® KRAIBURG USM – Sub Ballast Mat

Extension of the Underground railway line U2 in Vienna, Austria  
2005-2006 Construction Sections 4 to 6



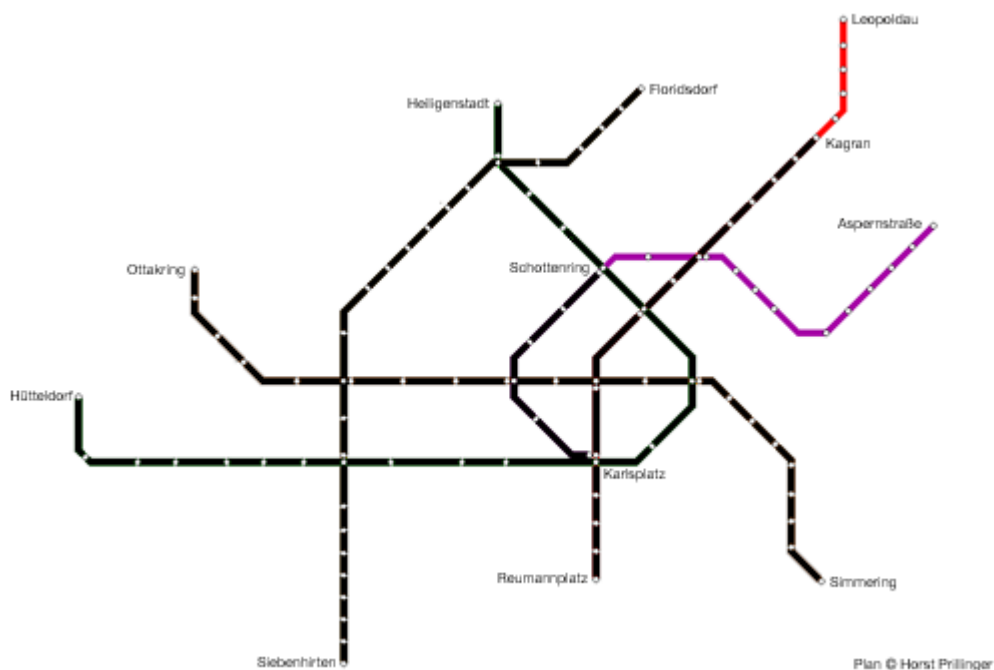
## In general

Sub Ballast Mat are mainly used to reduce the load on gravel as well as structure-borne sound emissions. They provide optimum fulfilment of technical requirements and a high level of economic efficiency.

Trials were carried out on existing line sections and showed that a reduction in structure-borne sound emissions of approx. 5 dB for frequencies >60 Hz up to at least 500 Hz can be achieved in comparison with a gravel permanent way without additional measures.

Construction of the third construction stage of the Vienna underground railways was started in the year 2001. This phase included the following network extensions:

- Extension of the line U1 to the north to the Leopoldau express line station (4.6 km)
- Extension of the line U2 from Schottenring to Aspernstrasse (9 km).



Upon completion of these extensions, the underground railway network will have a total length of 74.6 km.

The purpose of the U2 is to develop the Stadlau/Aspern district in order to relocate as much as possible of the cross-Donau road traffic, connected with a positive effect on the already existing underground railway network (relief for the U1).

The extension of the U2 will make it possible to travel from Donauspital to Karlsplatz in approx. 20 minutes.

## Installation

The Sub Ballast Mat are laid directly onto the seal in a thickness of 23 mm. The rising areas were also provided with a 23 mm layer.

The joints were glued with special industrial adhesive tape in order to prevent mats from slipping with subsequent formation of joint gaps.

For protection purposes, the complete area was then covered with P S 400 S polyfelt fleece as uppermost layer. This protects the Sub Ballast Mat against dirt and gravel abrasion. Laying the gravel bed commenced after this.



Abb. 1: Sealed concrete surface



Abb. 2: Delivery of product rolls  
**DAMTEC**® KRAIBURG USM Sub Ballast Mat on a pallet



**Fig. 3:** Laying the **DAMTEC**® KRAIBURG USM Sub Ballast Mat



**Fig. 4:** Gluing the joints with special adhesive tape



**Fig. 5:** Installation in side areas



**Fig. 6:** Fleece as protective layer



**Fig. 7:** Fastening in side areas



**Fig. 9:** Cutting out around pillars

**Fig. 8:** Drainage areas



**Fig. 10:** Total construction