



# Berlin Water Treatment Plant







Like all major cities, Berlin generates a high volume of polluted waste water and effluence. Around 650,000 m<sup>3</sup> of waste water are created every day - although this can more than double at some points in the year.

Effective treatment of waste water is essential to protect public health and prevent the pollution of rivers and streams. This is why, in Berlin alone, six water treatment plants are employed to clean and purify waste water which can then be safely discharged.

#### Preventing heat loss

One of the most important stages of water purification is the fermentation of waste in a large septic tank. This is a highly temperature dependent process in which temperatures must be kept at around 36-37°C. The energy required to maintain these temperatures, supplied into the tanks using electric heating elements, can be significant. With energy costs rising and a need to improve environmental performance the operators began to evaluate energy saving measures and quickly identified the role that insulation might play.

#### Demanding conditions

Being installed in such a moist and humid environment the potential for moisture ingress had to be considered. Open cell materials can absorb moisture, reducing the insulation effectiveness over

time. The scale of the septic tanks - 11.4 m high - meant that the ease and method of application would also be a major consideration.

After evaluating the options available, experienced local contractors Mummert Insulation Lübbenau were asked to install over 2,000 m<sup>2</sup> of 19 mm thick, self-adhesive backed, Kaiflex insulation with Kaiflex Protect Alu-Tec pre-applied.

#### Durable & Cost Effective Solution

Using a thickness of 19 mm with an integral closed cell structure, Kaiflex offers high levels of energy saving that endure over long periods. As a flexible material supplied in long rolls Kaiflex is easily applied to large tanks and on this particular project Kaimann even manufactured 11.4 m long rolls so that each would fit the tank perfectly.

The managing director of Mummert Insulation Lübbenau was more than pleased with the results. "For us it was important to have an alternative to open cell materials. A flexible, closed cell sheet was exactly what we needed for insulating a multiple meter tall vessel such as this. On this particular project the decision to use Kaiflex Alu-Tec pre-applied with a self-adhesive backing reduced our costs by about 50%."

