



UNDERGROUND PARKING GARAGE INSULATED WITH BOARDS FOR PERMANENT SHUTTERING DURING CONCRETE POURING OPERATIONS



CEILING

Location: Hamburg, Germany, 2011

Product(s) used: Tektalan A2-HDX used as boards for permanent shuttering

Building: DNV GL Group Headquarters

Client: DNV GL Group (formerly Germanischer Lloyd)

“Using insulation boards as a permanent shuttering boosts the efficiency of large projects like the construction of the DNV GL Group’s headquarters. In addition to the remarkable fire-resistance and heat protection properties of Tektalan HDX products, their high compressive strength is a key benefit.”

- Gerhard Gräf, Segment Marketing Manager of Knauf Insulation Germany

Challenge:

When selecting materials for the construction of an underground parking garage, it is necessary to take into account the federal and local ordinances that set requirements for fire resistance. In the case of a large garage constructed as part of the DNV GL Group Headquarters in Hamburg in 2011, the insulation layers needed to consist of non-combustible building materials. At the same time, it was necessary to use materials that provided a pleasing appearance for the garage.

This two-pronged challenge of simultaneously meeting safety standards and aesthetic requirements is common to situations where insulation is visible in the finished construction.

Solution:



DURABLE



FIRE SAFE



ACOUSTIC



THERMAL



ECO-FRIENDLY

The ability of any insulation product to satisfy the aesthetic requirements of its application depends not only on its appearance when freshly installed but also on its ability to maintain that appearance over time and exposure to the wear and tear of normal, day-to-day operation. The surfaces of Heraklith wood wool insulation products exhibit high resistance to impact, which ensures optimal durability against physical damage over time.

When properly specified and installed, Heraklith wood wool insulation can last for the life of the building in which it is used.





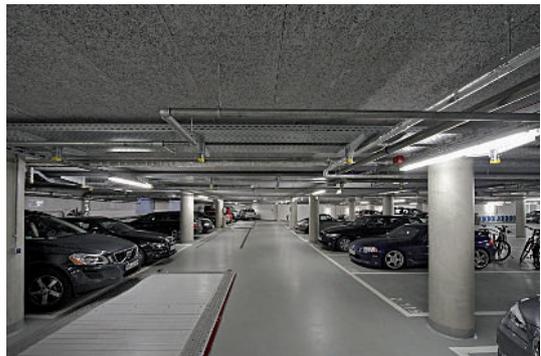
Heraklith.



To meet the challenge for the DNV GL Group Headquarters garage, the architects chose Tektalan A2-HDX, an insulation board with a rock wool core the fibres of which are oriented perpendicular to the board surface, which leads to a high compressive strength ($m \geq 100 \text{ kPa}$). The high compressive strength of these boards allowed them to be integrated directly into the garage ceiling during the concrete pouring stage and, therefore, to become a permanent part of the structure.

For this application, the ceiling layers of the boards consist of white cement-bound Heraklith wood wool, which provides for a visually pleasing surface with a lively fibre structure. The boards are in Euro-class A2-s1, do and are suitable for highly fire-resistant site-mixed concrete ceilings (F 180-A). In a fire, they do not generate smoke, and none of the ingredients burn or drip - which are important criteria, because they reduce the spread of fire and the danger of injury.

The integration of the boards directly into the site-mixed ceiling during cement pouring made the construction both quick and efficient - and over 2000 m² of Tektalan HDX was installed in a very short time.



MORE INFORMATION: www.heraklith.com



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