

abZ Summary

Situation in construction sector

Construction products or types of construction for which no technical standards exist or that differ significantly from established technical standards are designated as a "non-regulated construction product" or as "non-regulated construction type". The DIBt can, if requested to do so, investigate these types of construction products for their fitness for purpose.

Situation at Getzner

Sylomer® and Sylodyn® from Getzner are used to provide vibration protection and are not subject to any harmonised standards. They are considered as "non-regulated construction products" and therefore do not require approval. Nonetheless, Getzner took the decision to apply for national technical approval (abZ) with the DIBt (German Institute for Building Technology) to demonstrate the suitability of the materials and, moreover, to gain a competitive advantage over other elastomer manufacturers.

Who is the DIBt?

The German Institute for Building Technology (DIBt) is a technical approval authority in the building and construction industry based in Berlin and has around 200 employees. It is a member of EOTA (European Organisation for Technical Assessment) and other key national and international organisations. The Institute carries out its activities on the basis of an agreement concluded between central government and the federal states, making it the highest building authority in Germany. Its most important role is granting approval for non-regulated construction products and types of construction.

What is abZ?

The national technical approval (abZ) by the building inspectorate provides evidence of the suitability and fitness for purpose of a material with respect to construction requirements such as reliability, durability and quality. To this end, materials are subject to testing to assess product-specific properties such as creep behaviour, settlement behaviour, torsion, shear response and fire resistance.

The approval granted by the DIBt (German Institute for Building Technology) shows traders, planners and users that Sylomer® and Sylodyn® meet all the requirements for reliable use in the building and construction industry.

What were our materials tested for?

Rather than being tested in their usual area of application, the products were tested to the point of failure. This allows the structural engineer, under consideration of the load side, to analyse the structural safety, including all the essential safety factors.

Getzner materials with different densities and with form factors from 0.5 to 12, both bonded and homogeneous, were tested. Properties including deformation under pressure, torsion due to eccentric load transmission, shear modulus at different temperatures, ageing influences, e.g. ozone, and response under sustained loading were also examined. In total, more than 400 tests were performed for each material.

The assessment concept for our bearings is based on these tests (for further information, see the Sylomer® and Sylodyn® assessment concept document). The key figure here is the permitted design load $\sigma_{R,d}$ (= bearing resistance limit state).