



European Producers of Laminate Flooring



Wilhelm Klauditz Institute of Timber Research

Environmental properties of laminate flooring

(Abridged version)

Laminate flooring elements are wood-derived products with a high-quality surface coating and intended for indoor use. The wear layer consists of highly durable materials which have been widely used for many decades in kitchen and laboratory furniture, offices and shop-fitting applications. Many of these applications require strictest hygiene standards. The properties of both the laminates and the wood-based substrate have been described in various German and European standards.

The adhesives and coatings used in the manufacture of laminate flooring are water-based products. Formaldehyde or, in the case of laminated wood panels, phenol is the only volatile organic compound in the precondensed state. These systems do not contain organic solvents. Wood preservatives are neither used in particle and fibre boards nor in the surface coating of laminates. All systems used to harden binding agents in use nowadays are virtually chloride-free. Similarly, no use is made of polymers based on PVC in the manufacture of laminate flooring.

Maximum permissible formaldehyde emissions of wood-derived products are limited to 0.1 ppm by the relevant legislation prohibiting the use of toxic chemicals.

At levels between 0.005 and 0.03 ppm, emissions from laminate flooring have been shown by realistic experiments in special test chambers to be extremely low and are indeed within the concentration range of ambient room air. Further tests indicate that laminate flooring products are virtually emission-free.

Particularly beneficial in applications is the high chemical and thermal resistance of laminate coatings which facilitates care and cleaning. Laminate floors are particularly recommendable to allergy sufferers as they are simple to clean and their smooth finish does not offer dustmites the same ideal breeding conditions as other types of floor coverings.

Disposal of laminate flooring products is unproblematic as they can be treated in the same way as the wooden components of furniture. Laminates can be incinerated or recycled and do not constitute toxic waste requiring special precautions.

Prof. Dr. R. Marutzky