

# **Processing Miscanthus biomass into pulp, fibers and insulation materials**

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## **Souhrn**

Miscanthus is a perennial plant that can be used to supplement the usual raw materials for the production of fibrous and insulation materials. The desired product properties can be optimized.

With regard to the currently highly strained raw material market for forest wood, Miscanthus therefore offers a reasonable alternative and supplement.

Miscanthus can be processed into pulp and fibers. These intermediate products can be used to produce fiberboard for insulation or particleboard. Conventional fibers, for example from pine or spruce, can be added. Particularly in the field of insulation materials, the trend is increasingly toward natural-based materials. This can have a positive double effect: Energy required for heating or cooling buildings can be saved; and by dispensing with petroleum-based raw materials, non-renewable resources are conserved. The materials also serve as CO<sub>2</sub> storage and can be reused in the material cycle in several life cycles.

Advantageously, the Miscanthus raw material can be processed using the same methods and equipment as conventional wood-based materials. Adjustments may be necessary in the process conditions and formulations of the products. The decisive factor is the breakdown of the raw material; the process and the particle size achieved determine the further processing and the possible end products. In order to further optimize the materials produced from Miscanthus, extensive, practical tests are necessary, which were carried out in the MiscanValue project. As a result, it was possible to create products that can already be implemented on an industrial scale today and that meet general customer requirements.