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SUSTAINABLE USE OF VEGETAL FIBERS IN COMPOSITE MATERIALS. SOURCES OF VEGETAL FIBERS

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Abstract

Transition to a more sustainable economy and the consequences of the Kyoto protocol on global climate change, includes a shift of feedstock for energy and chemical industries from fossil fuels and petrochemicals to renewable resources. The use of vegetal fibers as major source of renewable resources represents a valuable alternative both from economical and environmental points of view. Traditionally, vegetal fibers are widely used in textile industry, paper manufacture, and packaging. Due to their specific properties, vegetal fibers are gained increased attention in obtaining composite materials.
This paper reviews the sources of vegetal fibers that can be potentially used as reinforcements in composite materials. The structure and properties of wood and annual plant fibers are briefly discussed. The advantages of vegetal fibers as raw materials in composite applications are also presented. Some considerations regarding environmental impact of using vegetal fibers in composites are underlined.

Key words: composites, environment, nonwoods, renewable resources, vegetal fibers

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