

Environmental Performance of Wood-Plastic Composites: A Study of VOC Emissions in Indoor Environments

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Abstract

The study investigates VOC emissions from wood-plastic composites containing 10% recycled automotive plastics. Emissions were analyzed by HS-GC-MS at 35 °C, 50 °C, 100 °C, and 150 °C. VOC levels increased with temperature. Emissions originated mainly from the wood component, with α -pinene, β -pinene, and 3-carene as dominant compounds. Recycled plastics did not significantly increase emission levels compared to the reference board.