

## Polyurethane foam reinforced with wood fiber for sound absorption materials

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Automobile industries look for materials that make drivers comfortable. At present, they use polyurethane foam to reduce noise pollution. Polyurethane foam can absorb sound by morphology and damping effect. Wood fiber was used to strengthen the effect. Moreover, having -OH groups, the fiber can be well mixed with polyurethane foam and make urethane linkage. The purpose of this study is composing polyurethane foam reinforced with wood and improvement of acoustic property in the foam. SEM was used to analyze the morphology effect of wood-polyurethane composite foam, DMA to damping effect, TGA to thermal property, and impedance tube to sound absorption.