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A brief review on micro-perforated sound absorbers

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The theory and design of microperforated panel sound-absorbing constructions have been introduced by D.-Y. Maa in 1975. Since then many variations of micro-perforated sound absorbing devices and materials have been introduced. Materials that have been used to be micro-perforated have been metal, wood, plastics and many others.

A survey of different applications of micro-perforation will be presented. Examples shown in more details are the development of stretched foils and metal as micro-perforated panels. Results of sound absorption measurements of various assemblies for normal and statistical incidence of sound will be shown and compared with theoretical predictions. Finally the potential of the micro-perforated sound absorber will be discussed.