

Tangent'delta

## Thermoacoustic test bench

- Unique Test Facility in the world
- Measurements & Expert assessment

Thermoacoustic test bench

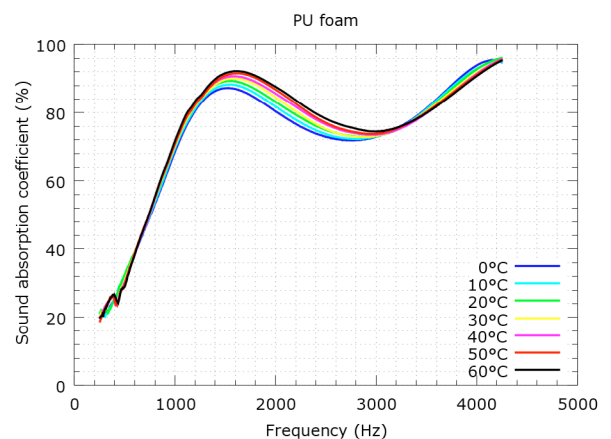
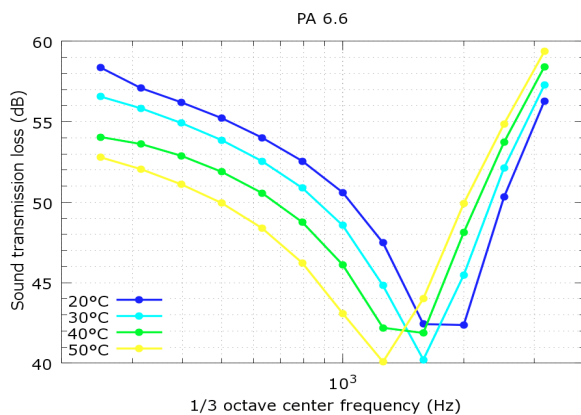
### Measurement of acoustic properties

Characterization of acoustic properties of materials under controlled conditions of temperature.

This is a **major innovation compared with conventional techniques** for this type of measurement performed only at the ambient temperature of a laboratory. We are able now to measure the temperature dependence of the following properties:

- Measure of the **sound absorption coefficient** in normal incidence in an impedance tube according to the standard NF EN ISO 10534-2 - Part 2: Method of the transfer function.
- Measure of the **Sound Transmission Loss** in normal incidence according to a three microphones method complementary to the standard ASTM E2611-09.

The thermoacoustic test bench leads also **to improve the reliability of measurements** at a fixed temperature.



### Technical data of thermoacoustic test bench

The test equipment comprises an impedance tube, where the air column, the speaker, the microphones and the test sample are moved to a defined temperature between **-10°C and +60°C**.

The frequency range is between **250 Hz and 4250 Hz**.

Sample holder of interior diameter: **44 mm**.

### Tested materials

We can test both sound absorption materials and sound insulating materials as polymers, composites, mineral fibers, natural fibers, plastics, bio-based plastics...

About 30 materials already tested.

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