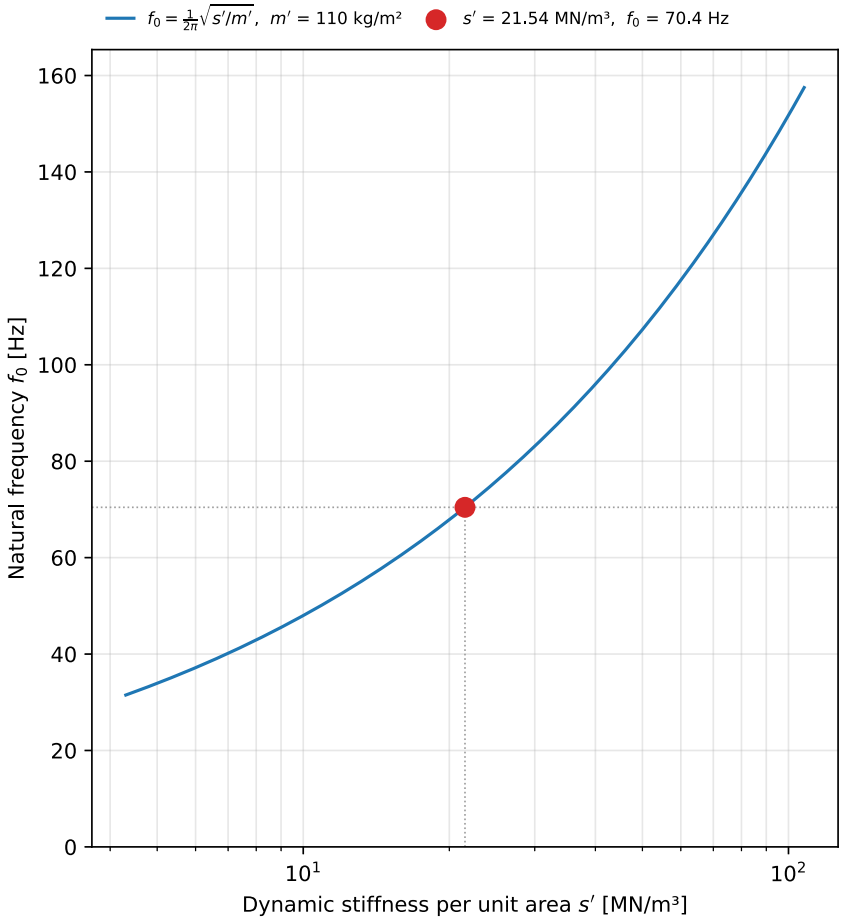
Dynamic stiffness of resilient materials

EN 29052-1 resonance measurement of the apparent dynamic stiffness per unit area of a resilient layer used under a floating floor per EN 29052-1:1992 (ISO 9052-1:1989).

Client:	Example client	Manufacturer:	Example insulation works
Description:	20 mm mineral-wool resilient layer	Total mass per area m'_t [kg/m²]:	200
Thickness under load d [mm]:	20	Test facility:	Dynamic-stiffness rig (example), 8 kg load plate
Date of test:	2026-07-21	Temperature [°C]:	21
Relative humidity [%]:	50		

Dynamic-stiffness results

Resonant frequency f_r [Hz]	45.0
Apparent dynamic stiffness s'_t [MN/m³]	16
Enclosed-gas stiffness s'_a [MN/m³]	6
Dynamic stiffness s' [MN/m³]	22
Supported-floor mass m' [kg/m²]	110
Natural frequency f_0 [Hz]	70.4



Apparent dynamic stiffness s'_t = 16 MN/m³

Dynamic stiffness s' = 22 MN/m³
Resonant frequency f_r = 45.0 Hz
Natural frequency f_0 = 70.4 Hz

Laboratory: Phonometry reference example
Report no.: EXAMPLE-29052-1
Date: 2026-07-21
Operator: phonometry Signature: _____

■ The results relate only to the tested specimen.

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