Ceiling Treatments

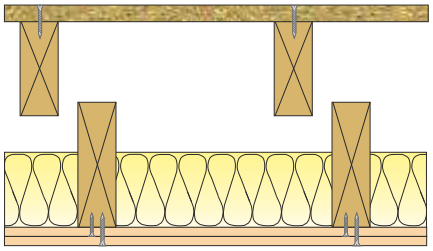
Introduction

The resistance to airborne sound depends mainly on the mass per unit area of the structural floor and partly on the ceiling's construction. It is therefore important to choose a ceiling treatment that complements the performance of the chosen structural floor, to produce an overall structure that exceeds the required dB values.
De-coupling the ceiling from the structural floor is an effective way of reducing the contact path that impact sound can follow. Adding mass in the way of plasterboard to the floor structure and filling the ceiling void with a mineral wool will also improve the acoustic performance of the structure.

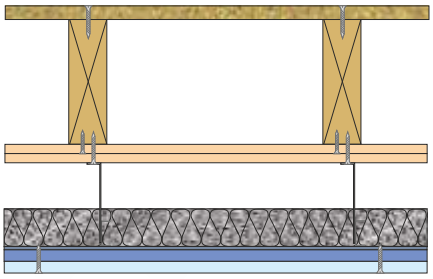
Listed below are three types of ceiling treatments available in order of performance.

Ceiling Treatment A: Independent ceiling

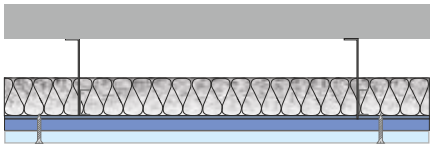
1) Independent joists
Cavity filled with 50mm **CELLECTA FIBRE*fon* Micro 50** or 100mm mineral wool (10kg/m^3).



2) Proprietary metal frame suspended ceiling system[(A)]
Cavity filled with 50mm **CELLECTA FIBRE*fon* Micro 50** or 100mm mineral wool (10kg/m^3).



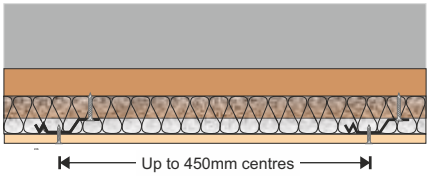
3) Proprietary metal frame suspended ceiling system[(A)]
Cavity filled with 50mm **CELLECTA FIBRE*fon* Micro 50** or 100mm mineral wool (10kg/m^3).



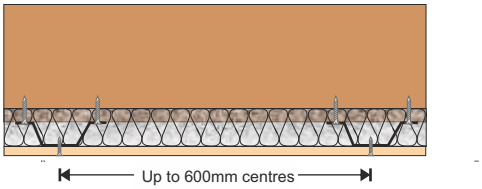
Notes
[(A)] The use of a better performing ceiling is permitted provided there is no significant flanking transmission.
Professional advice should be sort to ensure the overall floor construction complies with current fire regulations.

Ceiling Treatment B: Plasterboard on proprietary resilient bars with absorbing material

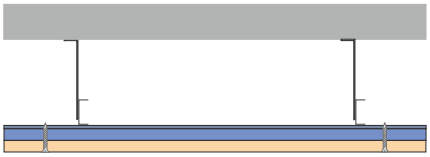
1. Proprietary resilient bars fixed to timber battens
Cavity filled with 50mm **CELLECTA FIBRE*fon* Micro 50** or 100mm mineral wool (10kg/m^3).



2. CELLECTA HP30 resilient bars fixed to timber
Cavity filled with 50mm **CELLECTA FIBRE*fon* Micro 50** or 100mm mineral wool (10kg/m^3).

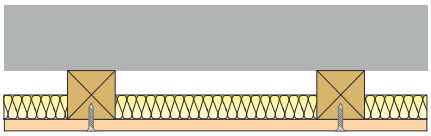


3. Proprietary metal frame suspended ceiling system[(A)]

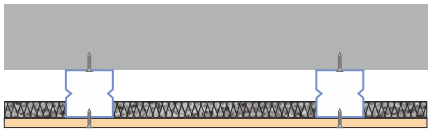


Ceiling Treatment C: Plasterboard on timber battens or proprietary resilient channels with absorbing material
Cavity filled with 50mm **CELLECTA FIBRE*fon* Micro 50** or 100mm mineral wool (10kg/m^3).

1. Timber battens



2. Proprietary resilient channels



Further guidance is given in Approved Document E, Section 5 of the Scottish Building Standards and the Robust details handbook. The manufacturer of the proposed ceiling system should also be consulted.