

Recessed light fittings in ceilings to intermediate floors in houses

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Question

What should be considered when installing recessed light fittings (downlighters) in plasterboard ceilings, to intermediate floors in houses, with regards to fire resistance and isolation from insulation?

Considerations

- Fire resistance of a floor will vary depending on the type of floor deck, joists type e.g. solid, I-joists or metal web joists, and thickness and type of plasterboard used for the ceiling.
- Holes in ceilings will reduce the fire resistance of the ceiling/floor construction.
- Proprietary fire hoods can be used over light fittings to help provide the required fire resistance.
- Certified fire resistant downlighters are available, which achieve fire resistance without further protection.
- To avoid heat build-up and loss of performance, drivers, transformers and lamps should not be covered by insulation.
- Intermediate floors in houses require a modified or full half-hour resistance where the top floor is no higher than 5m from the outside ground level, otherwise they need to achieve 60 minutes.

Answer

Solid timber joists

Non fire-rated downlighters, without further protection, should have fire test evidence for use in a similar solid joist floor build-up, or be fitted with fire hoods. Alternatively, fire resisting downlighters should be used.

Fire-resistant downlighters and fire-resistant hoods are only acceptable if test evidence supports their use in a similar solid joist floor build-up.

I-joists and metal web joists

For engineered floor joists, it is recommended that all recessed downlighters be either fire resistant or fitted with fire hoods.

Fire-resistant downlighters and fire-resistant hoods are only acceptable if test evidence supports their use in a similar engineered joist floor build-up.

General

In all floor types, insulation should be kept back from the light fitting to safely disperse the build up of heat around the driver/transformer and lamp.