

Technical Guidance

Recessed light fittings in ceilings to intermediate floors in houses

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(Second Issue)



Question

Downlighters in ceilings are widely used in commercial buildings. Each ceiling is subject to fire regulations and where applicable the ceiling construction needs to be fire rated.

Consideration

- 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 fire 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.