Technical Guidance

Recessed light fittings in ceilings to intermediate floors in houses

Question

Is there guidance on the use of recessed light fittings in plasterboard ceilings to intermediate floors in houses with regard to fire resistance, spacing and isolation from insulation?

Considerations

- Holes in ceilings may reduce the fire resistance of the ceiling/floor construction.
- Recessed light fittings are generally accepted in ceilings with solid timber floor joists.
- Fire assessments have been carried out using recessed light fittings in ceilings with I-joists and metal web joists.
- Boxing or proprietary fire hoods can be used over light fittings to help provide the required fire resistance.
- Certified fire resistant recessed light fittings are available which achieve fire resistance without further protection.
- Heat build up from transformers and lamps can cause damage to the transformer and light fitting and surrounding materials if covered with insulation.

Answer

Solid timber joists

145mm diameter holes for spot lamp fittings at up to 1 fitting per m^2 or 90 mm diameter holes for halogen fittings up to 2 fittings per m^2 are acceptable.

I-joists and metal web joists

Fire tests and assessments for the use of recessed lights with I-joists and metal webs, differ between the various joist manufacturers. It has been shown that 15mm plasterboard ceilings with 85mm diameter holes no closer than 900mm apart will achieve a 30 minute fire resistance. The manufacturer's fire assessment should be provided if larger holes or closer centres are proposed or in case of any doubt.

Standard rec essed lig ht fittings with a boxing or hood to the appropriate fire rating or certified fire rated recessed lig ht fittings can be installed without hole size and spacing restrictions.

Insulation should be kept back from the fitting to safely disperse the build up of heat around the transformer/lamp.

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