AS/NZS 3000:2007 4.5.2.3 - RECESSED LUMINAIRES

4.5.2.3 *Recessed luminaires*

Recessed luminaires and their auxiliary equipment shall be installed in a manner designed to minimize temperature rise and prevent the risk of fire.

The temperature rise at the rear of a recessed luminaire shall be limited to prevent damage to adjacent materials.

This requirement shall be satisfied by one of the following methods:

(a) The use of a luminaire specifically designed and certified by the manufacturer to permit—

  (i) contact with combustible materials; or

  (ii) enclosure or covering by thermal insulation material,

  as appropriate to the location of the luminaire.

(b) Installation of the luminaire within a suitable fire-resistant enclosure.

(c) Provision of required clearances from combustible and thermal insulating material as specified by the manufacturer of the luminaire.

(d) Provision of the default clearances from combustible and thermal insulating material as specified in Figure 4.7.

Where manufacturer's installation instructions that specify required clearances are not available, the luminaire shall be installed in accordance with (b) or (d).

NOTE: In the case of a suitably designed luminaire, the installation instructions may specify that no clearance is required.

Recessed luminaires and their auxiliary equipment shall be installed in such a manner that necessary cooling air movement through or around the luminaire is not impaired by thermal insulation or other material.

Where thermal insulation is of a type that is not fixed in position, e.g. loose fill, a barrier or guard constructed of fire-resistant material shall be provided and secured in position to maintain the necessary clearance (see Figure 4.7).

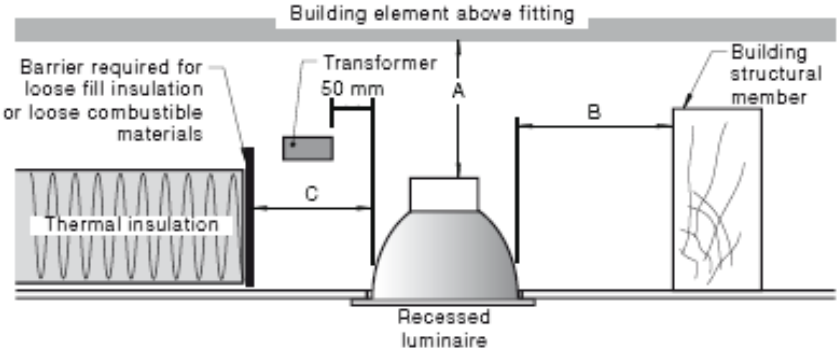
Where thermal insulation may reasonably be expected to be installed in the space containing a recessed luminaire, the luminaire shall be installed in such a manner as to provide for the subsequent installation of thermal insulation.

Recessed luminaires shall be installed in accordance with (a) or (b), or provided with equivalent protective measures, where there is a likelihood of extraneous combustible material, e.g. leaves or vermin debris, etc., collecting on or around the luminaire.

NOTES:

1 National Building Codes require the installation of thermal insulation in many situations.

2 AS/NZS 60598.1 and AS/NZS 60598.2.2 detail the test method and the maximum surface temperatures permitted for recessed luminaires. These maximum temperature limits must be satisfied to permit any reduction in the default values of Figure 4.7.



Dimension	Incandescent lamp	Halogen lamp
A – clearance above luminaire	50 mm	200 mm
B - side clearance to structural member	100 mm	200 mm
C – clearance to thermal insulation	50 mm	200 mm
D – clearance to supply transformer	50 mm	

FIGURE 4.7 DEFAULT MINIMUM CLEARANCES FOR RECESSED LUMINAIRES