



GUIDELINE

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FREE MONTHLY UPDATE ON BUILDING ISSUES PREPARED BY BRANZ
AND FUNDED BY THE BUILDING RESEARCH LEVY

COOKING (WITH OR WITHOUT GAS)

Heat generating appliances include solid fuel heaters and stoves, e.g. wood burners, gas-fired appliances and oil heaters. All of these have relevant standards that are required by Approved Documents for the New Zealand Building Code Fire Safety Clause C/AS1 Part 9, Outbreak of Fire.

One thing they have in common is the requirement to ensure that the temperature of heat sensitive materials adjacent to the appliance remains below a certain value. This is usually done by specifying a separation distance for various materials from the heat source. In the case of gas-fired domestic cooking appliances, as given in NZS 5261:2003, this is a temperature rise above an ambient temperature of 65°C on combustible materials. Assuming the ambient temperature is 20°C the wall lining material is required to be able to survive a temperature of 85°C.

All building materials except ceramics, concrete, glass, metals and gypsum products may be considered combustible. Paper-faced gypsum wallboards are generally non-combustible, although the paper facing will deteriorate at temperatures above their service temperature of 50°C. The temperature rise permitted by NZS 5261 is ambient (say 20°C) plus 65°C (i.e. 85°C).

The purpose of the temperature limit is to prevent combustible material catching fire and causing a hazard to building occupants during **the normal operation of the appliance**. It is not to prevent the spread of fire arising from, say, a frying pan fire. It also does not guarantee that the service temperature of the non-combustible material will not be exceeded, i.e. the material used will very likely deteriorate in such circumstances.

NZS 5261 suggests that 0.4 mm thick sheet steel, 5 mm thick ceramic tiles or granite or marble, stainless steel or tempered glass would provide adequate protection. Tempered glass fixed over a paper-faced gypsum wallboard would also strictly comply with NZS 5261, albeit with cosmetic damage resulting when the paper facing was subject to temperatures exceeding 60°C, due to heat transfer through the glass.

Another material in close proximity to cooking appliances may be particleboard or MDF with a high pressure laminate (e.g. formica) covering, or even solid timber. These should be protected when within the specified clearance zone. For most domestic cooking ovens, temperature rises of 65°C should not be exceeded on nearby kitchen joinery.

Cook tops should not be installed, or used, in a way that flames from burners (e.g. wok burners) impinge on the surrounding walls. The installation of these devices is not considered by NZS 5261, because even if it does not cause the temperature rises it may affect the appearance of the walls. The advice of the manufacturer should be sought for clearances for these appliances. Some of these burners are mobile, in which case they should be used with care.

In conclusion, the recommendations for protection of a combustible surface near a gas cooking appliance given in NZS 5261, Clause 2.7.1.2, would be adequate to protect most commonly used building materials used around stoves. It is highly unlikely that a modern, properly used gas cooking appliance would provide a fire hazard, and the protection suggested in NZS 5261 **should** give cosmetic protection to nearby materials.

Note that AS/NZS 2918 for solid fuel heaters has a test method to establish clearances, but NZS 5261 does not.

BUILDING WRAPS ARE NOT A CLADDING

In the past, we have commented on the poor practice we have observed of using building wraps as a temporary cladding. An inconvenient delay in getting a bricklayer to the site is not a reason to have a new house wrapped in building wrap, windows and doors installed, the interior fitted out with insulation, linings, joinery and even paint finishes and floor coverings being applied. Apparently the demand for brickies is still such that this risky practice remains popular. Examples were recently seen in Mosgiel, but there are other regions, too, that seem to have embraced this practice. Because the building wrap for use behind brickwork requires a durability of 50 years, it is important to realise that the practice of deliberately leaving the wrap exposed may also compromise the 50 year durability of the wrap.

EXTRA SEMINARS

An additional seminar 'Weathertightness - New Solutions' will be held in Auckland on Wednesday, 1 September at the Sky City Conference Centre (1.30-4.30pm). Price: \$50 per person, students and apprentices \$20.

UPCOMING CITE COURSES

BRANZ Certificate in Building Compliance for IQPs

Auckland: 14-17 September
Christchurch: 5-8 October
Cost: \$1,350 (\$1,518.75 incl. GST)

BRANZ Certificate in Domestic Sprinkler Design (NZQA approved)

Auckland: 23-24 November
Christchurch: 12-13 October
Wellington: 9-10 November
Cost: \$850 (\$956.25 incl. GST)

BRANZ Certificate in Building Controls

Auckland
Week 1: 18-22 October
Week 2: 29 November-3 December
Cost: \$3,500 (\$3,937.50 incl. GST)

For course outlines, registration forms and venue details please visit www.branz.co.nz (CITE Industry Training) or call Fiona McColl, CITE Education Officer on 04 238 1291.