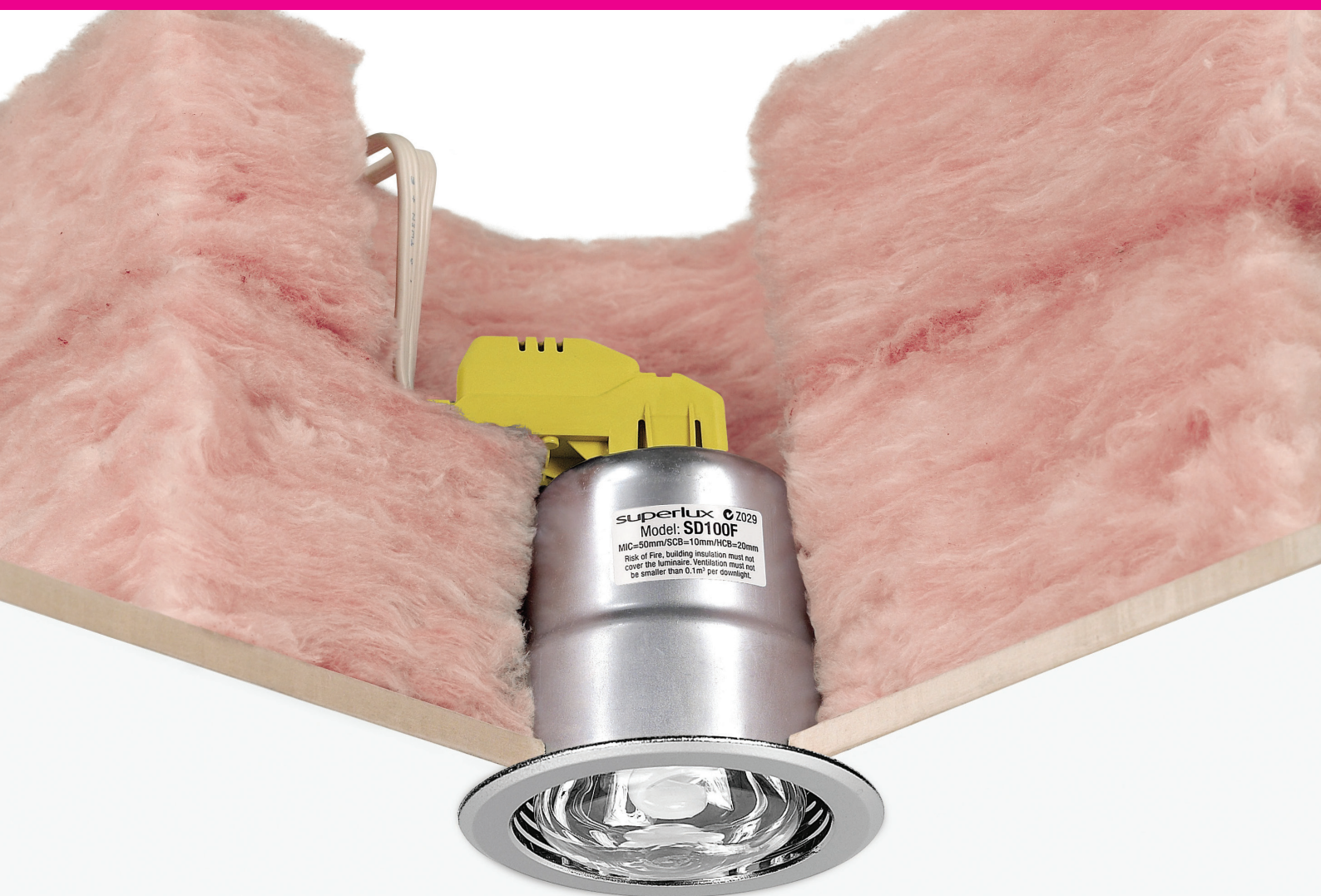




A Guide to Changes in New Zealand Downlights Standard

AS/NZS 60598.2.2: 2001 Including Amendment A - Luminaires Part 2.2 Particular requirements - Recessed luminaires



Effective July 2012

Update bought to you by Pink® Batts® insulation

Introduction

In 2011, changes to the recessed luminaires (also referred to as downlights) standard were made. These introduced new classes of recessed downlights that eliminate clearances and ensure safer installation with surrounding thermal insulation.

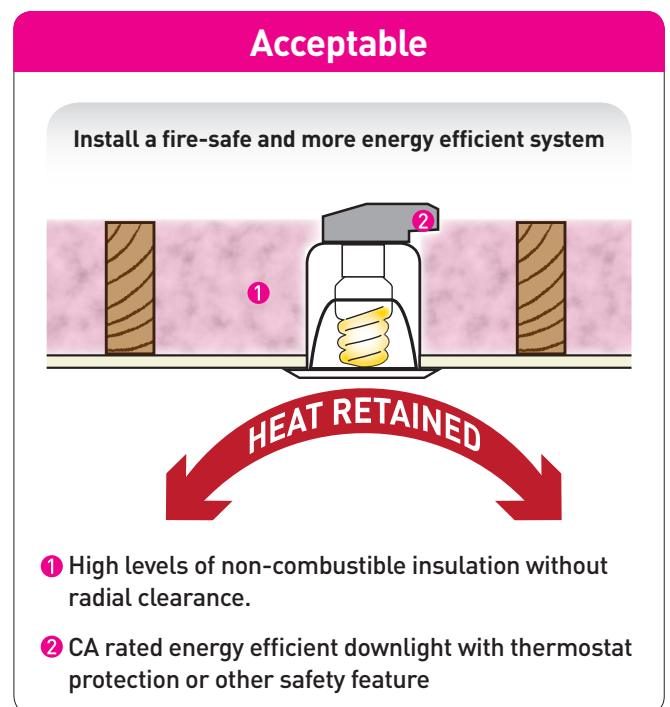
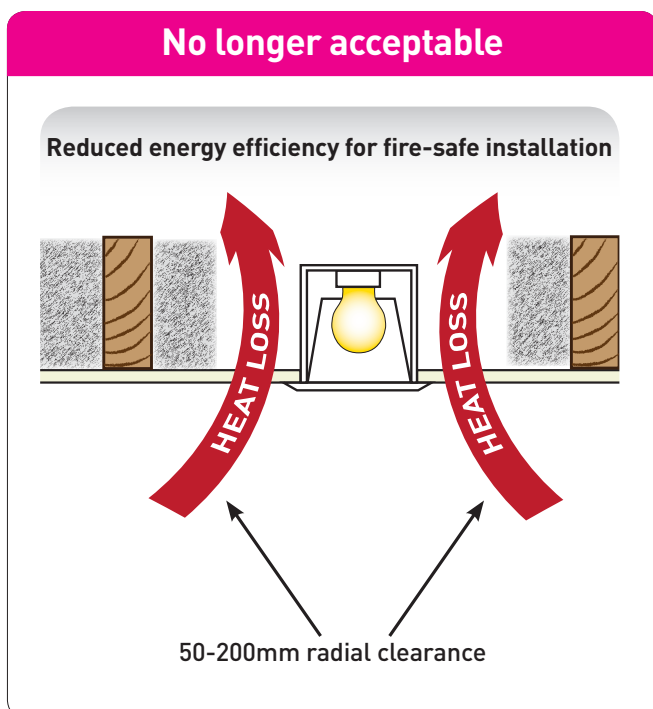
The standard (AS/NZS 60598.2.2) recognises thermal insulation and/or downlights with varying risk of fire are being installed in an increasing number of new and existing homes, including those homes participating in the EECA Warm Up New Zealand: Heat Smart programme. It aims to ensure that **“a downlight will not be unsafe if thermal insulation, which is specified as safe to use with downlights, is installed incorrectly over it.”**

What does this mean for downlights?

- All new products manufactured or imported into NZ must be one of five new classes
- Only four of the five classes may be used in residential buildings
- Any residential class downlight must be failsafe if accidentally covered with building insulation
- Covers or barriers are to be supplied as part of the downlight, or specified by the downlight manufacturer
- Downlights must have adequate protection to prevent risk of fire with building insulation

What does this mean for thermal insulation in residential buildings?






- As downlight clearances are no longer permitted, buildings will be more thermally efficient
- Installed insulation must maintain its structural integrity at specific temperatures (80/135°C) determined by the downlight installed
- Insulation material must typically pass the AS/NZS 60695.11.5 Needle Flame Test method on all surfaces
- Loose fill material may not be used unless specified by the downlight manufacturer
- Downlight manufacturers must state what building/thermal insulation is safe and compatible to use with the downlight



New standard effective July 2012

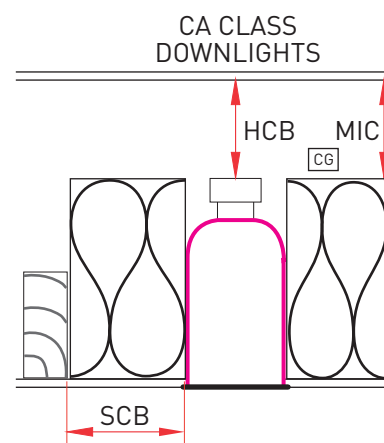
New downlight classification and labelling requirements as per AS/NZS 60598.2.2 are shown below. Each downlight must now be clearly identified, with clearance from building elements and insulation type specified to reduce risk of fire.

AS/NZ S60598.2.2 Downlight Class Markings

Class Markings	Description	Residential	Commercial
	A cooler running, closed abutted recessed luminaire where fixed insulating material (of the downlight manufacturer's specifications) can be abutted to sides	✓	✓
	A closed abutted recessed luminaire where fixed insulating material (of the downlight manufacturer's specifications) can be abutted to sides	✓	✓
	Recessed luminaire where fixed building insulation material (of the downlight manufacturer's specifications) can abut and cover the recessed luminaire	✓	✓
	Recessed luminaire where fixed building insulation material can abut and cover the recessed luminaire	✓	✓
	A recessed luminaire where building insulation material must not cover or come in contact with any part of the luminaire	✗	✓

Risk of Fire Instructions must include minimum clearances to building elements and insulation type

SCB	Side clearance to building elements
HCB	Height clearance to building elements
SCI	Side clearance to building insulation (non-IC only)
MIC	Minimum clearance above building insulation for ventilation
Insulation type	Class Markings and manufacturer's specifications dictate what type of insulation is safe for each model of downlight



Residential Lighting and Insulation Specifications

Selecting the right recessed downlight and insulation is easy.

Step One: Select lighting

When selecting a recessed downlight ensure it is labelled with one of the following:



Current technology limits the durability and availability of these classes of downlights

Step Two: Select insulation

Selecting the right insulation is easy. Either:

Follow the lighting manufacturer's recommendation

TIP: Non-combustible insulation is NOT the same as non-flammable insulation.

- Non-combustible insulation will not catch fire or melt easily when exposed to a continuous flame
- Non-flammable insulation can still catch fire but will self-extinguish if the flame is removed

or

Ensure insulation meets the requirements below

For all classes of recessed downlights where insulation is not specified, ensure the insulation is compatible with all classes by complying with the requirements below:

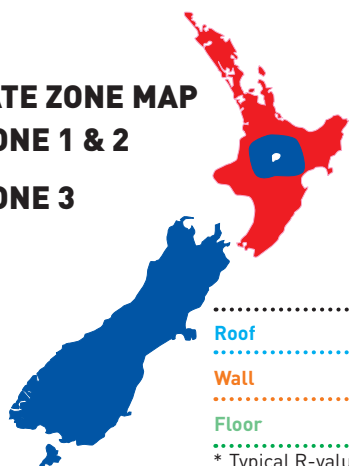
Requirement	Insulation Material	
	Pink® Batts® glass wool insulation	Other insulation material
Maintains structural integrity at 80°C or 135°C	✓	Product dependent - check with manufacturer
Passes Fire Hazard Test AS/NZS 60695.11.5.	✓	Product dependent - check with manufacturer

Step Three: Select the right level of insulation for New Zealand climate conditions

CLIMATE ZONE MAP

■ ZONE 1 & 2

■ ZONE 3



APPLICATION TABLE

	Zone 1 & 2		Zone 3	
	MINIMUM*	BEST	MINIMUM*	BEST
	PINK® BATTS® CLASSIC	PINK® BATTS® ULTRA®	PINK® BATTS® CLASSIC	PINK® BATTS® ULTRA®
Roof	R3.2 Ceiling	R4.0 Ceiling	R3.6 Ceiling	R5.0 Ceiling
Wall	R2.2 Wall	R2.6 Wall	R2.4 Wall	R2.8 Wall
Floor	R1.6 SnugFloor®	R2.6 SnugFloor®	R1.6 SnugFloor®	R2.6 SnugFloor®

* Typical R-value of insulation required to meet New Zealand Building Code (NZBC) clause H1, may not comply with NZBC in all situations.

This document supersedes all previous versions and may have been superseded; is a guide only and the purchaser should ascertain the suitability of this product for the end-use situation intended and when used in conjunction with other products; and is provided without prejudice to Tasman Insulation New Zealand Ltd (Tasman) standard terms of sale. Tasman retains the right to change specification without prior notice. Refer to www.pinkbatts.co.nz or consult Tasman for further information. Do not use this product for any application not detailed in this document or otherwise in relation to the product is limited to the fullest extent permitted by law. Except where the consumer acquires the goods for the purposes of a business, any rights a consumer may have under the Consumer Guarantees Act are not affected.

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