



0531 Suspended Ceilings - Combined

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00 Design Principles

0.01 Main considerations

It is a requirement to undertake the [00 PLANNING AND DESIGN/0001R - DESIGN REFERENCE](#) and [GLOSSARY OF TERMS](#) information into all aspects of design, detailing and delivery when developing the content here within. Clear demonstration of adherence to these requirements is part of the services and will be called upon at key points in the project and during at the discretion of the Department of Education (DoE).

Specification

- Suspended ceiling system selections should be based on the following performance criteria:
- Offer value for money in a Whole of Life framework;
- Should use readily available commercial proprietary components
- Have appropriate aesthetic appeal.
- Pre-finished surfaces are advantages to reduce future maintenance requirements.
- Offer long life span with high durability and robustness.
- Have low maintenance requirements and costs.
- Visible surfaces should be capable of being easily cleaned and repaired if damaged.
- Provide appropriate functionality for the location and use of the area including:
- Acoustic suitability to expected background and activity noise levels
- Appropriate aesthetic appeal when finished
- Water resistance in wet areas
- Impact resistance.
- Support sustainability by having recycling potential at the end of usable life, and/or include recycled content.
- Compliance with BCA Fire Hazard Properties

01 General

As per current NATSPEC except as follows:

01.8 Fire Hazard Properties

General

Requirement: Comply with [BCA](#) Specification C1.10a which sets out requirements in relation to the fire hazard properties of wall and ceiling linings.

Wall and ceiling linings must comply with BCA Specification C1.10a Table 3, Wall and Ceiling Linings Materials (Material Groups Permitted).

02 Products

As per current NATSPEC.

03 Execution

As per current NATSPEC except as follows:

03.1 Panels

GUIDE NOTE: Add the following:

Register / ceiling grille for roof ventilator

Refer to [04 ENCLOSURE /0421 ROOFING - COMBINED](#)

Minimum size: The minimum clear area of the register / grille must be equal to the diameter of the rotary ventilator throat.

04 Selections

As per current NATSPEC except as follows:

04.5 Acoustic Ceilings

GUIDE NOTE: Refer to the [Educational Facilities Standards and Guidelines](#) (EFSG) for areas which require Acoustic Ceilings.

Select an acoustic ceiling system from the following alternatives. Specify the appropriate acoustic blanket to suit the requirements of the room.

Corrugated and perforated metal ceiling lining – standard profile

- Type: Proprietary perforated and roll-formed corrugated steel zincalume sheet and purpose made accessories forming part of a system to [AS 1562.1](#).
- Furring/fixing system: Proprietary black matt finished universal carrier rails or furring system. Comply with the manufacturer's recommended spacings, spans and fixing requirements.
- Wall trims: Cold rolled steel angles, colour finish to match ceiling panels, fixed to walls at 600 mm centres.
- Material: Pre-painted and organic film/laminate products: To AS 2728, Category 3 or 4 as appropriate to all ceiling sheets/panels and metal trims.
- Thickness: 0.42 mm (minimum) B.M.T. (Base Metal Thickness)
- Corrugation depth: 16 mm (minimum)
- Suspension system: Concealed suspended ceiling grid
- Acoustic blanket: Polyester fibre black lined acoustic blanket manufactured from thermally bonded polyester.
- Standard: To AS 3742
- Finish: Black

Corrugated and perforated metal ceiling lining – mini profile

- Type: Proprietary perforated and roll-formed corrugated steel zincalume sheet and purpose made accessories forming part of a system to AS 1562.1.
- Furring/fixing system: Proprietary black matt finished universal carrier rails or furring system. Comply with the manufacturer's recommended spacings, spans and fixing requirements.
- Wall trims: Cold rolled steel angles, colour finish to match ceiling panels, fixed to walls at 600 mm centres.
- Material: Pre-painted and organic film/laminate products: To AS 2728, Category 3 or 4 as appropriate to all ceiling sheets/panels and metal trims.
- Thickness: 0.42 mm (minimum) B.M.T. (Base Metal Thickness).
- Corrugation depth: 6 mm (minimum).
- Suspension system: Concealed suspended ceiling grid
- Acoustic blanket: Polyester fibre black lined acoustic blanket manufactured from thermally bonded polyester.
- Standard: To AS 3742
- Finish: Black

Linear metal ceiling lining

- Type: Perforated linear metal ceiling - school series, consisting of panels made from colour-coated 0.4mm thick galvanised steel, 84mm wide x 15mm deep with square sides.
- Material: Polar White, 5% gloss.
- Suspension system: Panel carriers made from colour-coated 0.5mm thick steel, matt black, 62mm wide x 29mm deep, with prongs to hold the panels in a module of 50mm.
- Installation: In accordance with the manufacturer's fixing instructions.
- Acoustic blanket: Polyester fibre black lined acoustic blanket manufactured from thermally bonded polyester.
- Standard: To AS 3742
- Finish: Black

Perforated plasterboard ceiling

- Type: 13mm thick perforated plasterboard sheet.
- Plasterboard: To AS/NZS 2588
- Suspension system: Concealed suspended ceiling grid.
- Acoustic blanket: Polyester fibre black lined acoustic blanket manufactured from thermally bonded polyester.
- Standard: To AS 3742
- Finish: Black

Acoustic impervious suspended ceiling

- Type: Fire resistant proprietary acoustic impervious ceiling panels with a high density, resin bonded insulation with primed edges and a white micro-porous painted surface specially designed for use in hygienic locations.
- The surface must be capable of being cleaned on a regular basis with a damp cloth.
- Size (nominal): 1200 x 600 x 20mm thick OR 600 x 600 x 20mm thick.
- Suspension system:
 - A proprietary corrosion resistant grid suspension system in accordance with the manufacturers printed instructions. Provide accessories and trim to complete installation.
- Installation:

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- Seal between panels and back face of grid with a silicone sealer. Leave two panels near entrance to room unsealed for access above ceiling.
 - Provide openings for, and fit the ceiling system up to, service elements such as light fittings and ventilation grilles.
 - Seal all penetrations with a impervious joint sealing compound
 - Cut edges must be resealed with an impervious edge sealer.
 - Ceiling clips:
 - Proprietary compatible anti lift ceiling clips.
 - Clips are to be evenly configured in accordance with the manufacturers printed instructions.
 - NRC: >85
 - Weight including grid system (nominal): 3 – 4kg/m²
 - Colour: White