Fletcher Insulation
Building Better, Together

# Offices & Warehouses

## Building better work places, together

Commercial buildings

# Fletcher Insulation helps Australia's leading architects and builders design more sustainable working environments.

## A healthier, more comfortable workplace is good for people and business.

Not only is insulation an important factor in making commercial buildings more energy efficient, but it's also crucial in creating a more comfortable, productive place in which to work. Whether you're designing an open-plan office space, a large warehouse, or a multi-use building, insulation is a fundamental building material, helping to control noise, temperature, moisture condensation, and air quality.

Long-lasting, sustainable insulation materials help to support energy efficiency and contain energy costs through passive cooling and warming. With Fletcher Insulation, you can be confident our industry-leading insulation solutions will meet your criteria for quality and cost-effectiveness. Our technical and service teams support architects and specifiers to design best-practice offices, warehouses, and multi-use buildings. We've designed a range of insulation solutions to support the wellbeing and comfort of people working in all types of workplaces.



# Creating sustainable, healthy, and comfortable commercial environments

**People spend half their waking hours at work. So, it makes sense that workplaces providing thermal and acoustic comfort to support the wellbeing of workers, are more productive workplaces.**

These days, smart workplace design is evidenced-based. As well as incorporating appealing aesthetics, designers can now create an environment that supports increased productivity based on well-researched design principles.

Fletcher Insulation provides architects and specifiers with the insulation solutions they need to create workplaces that are both energy-efficient and supportive of people at work.

Using our range of sustainable insulation materials—in walls and ceilings, under floors and roofs, around building services, and in and around the HVAC—we help designers build more comfortable workplace environments.

## How insulation helps to create better workplace environments

- Thermal and indoor air quality (IEQ) have been identified as the two most important aspects of the built environment that have an impact on people working in offices.[1] Insulation is a key contributor to improving both.
- By selecting the optimal acoustic insulation materials, designers not only reduce noise disturbance, but they also help reduce stress, distraction, and low performance in the workplace.[2]
- A nation-wide survey of 1,719 Australian workers found that three quarters had experienced heat stress at work and 10% were intending on quitting their jobs because of it.[3] Insulation is an effective way of managing the indoor climate of Australian workplaces, helping to maintain the comfort level of workers.

At Fletcher Insulation we'll help you specify the optimal insulation materials for use in your office and warehouse building projects.

We provide solutions that contribute to creating:

- a healthier indoor environment for people at work
- reduced energy solutions to control costs and environmental impact
- higher Green-Star ratings and WELL certification
- safe, fire-resistant construction systems

# Taking a holistic approach to the health and wellbeing of people working in offices and warehouses

**The conditions in most office environments compared to those found in a typical warehouse vary considerably. But what they have in common is the need to support the people who work in them.**

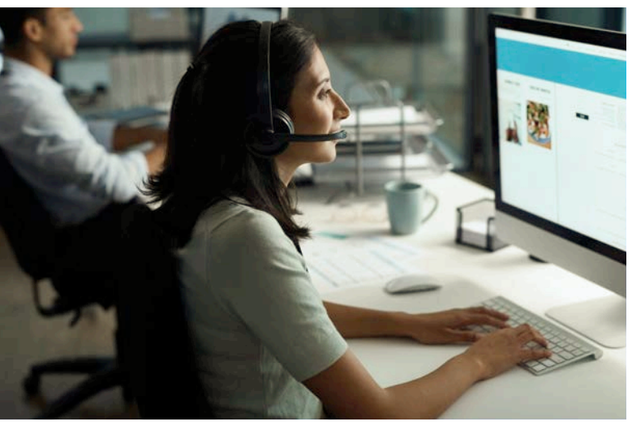
According to research,[4] both cold and hot temperatures increase the risk of work-related injuries and illnesses. In extreme conditions thermal discomfort can result in adverse behavioural effects, such as disorientation, impaired judgement, loss of concentration, reduced vigilance, carelessness, and fatigue. Chronic conditions such as respiratory diseases and skin diseases can also be exacerbated by factors associated with extreme temperatures.

In both office and warehouse environments, a comfortable indoor temperature is often regulated by air conditioning. Building and HVAC insulation is a proven way of increasing the efficiency of both cooling and heating systems. In unconditioned warehouses, thermal and acoustic insulation plays an important role in protecting the building from radiant heat and unwanted noise.

## The importance of acoustic comfort

**To create the best conditions for people to work in, all workplaces should be designed for people's acoustic comfort.**

- As the popularity of open-plan offices increased, it became clear that this type of office design led to unacceptable levels of background noise.[2] Continually being exposed to irrelevant and unintelligible conversations caused people to become distracted, leading to a decrease in productivity. A lack of privacy was also an issue.



- The increasing use of audio and video conferencing has also presented challenges within an office. It's important that a comfortable acoustic environment supports clear and comfortable communication without interfering with others in the workspace.
- The installation of ceiling insulation, along with privacy and acoustic panels, was shown to significantly improve speech intelligibility and communication within an office environment.[5]
- Noise from external sources and from machinery plus from other internally generated noise and vibration, can present health and safety risks for workers. As well as being a threat to their hearing, the presence of excessive noise may mean they're unable to hear instructions and warnings or hear oncoming machinery or vehicles. While wearing personal protective equipment (PPE) is recommended, workers in a more industrial setting also benefit from the acoustic absorption and noise isolation that insulation offers.[6]

Fletcher Insulation products are designed on the principal that quality acoustic design supports the health and wellbeing of all people in our community.

## Controlling indoor thermal comfort, air quality and building condensation

**As well as wanting to create a highly productive work environment, Australian employers have a duty of care to look after their employees.**

A well-managed indoor environment supports the wellbeing of its occupants. A workplace that's thermally comfortable and has a healthy indoor air quality helps workers focus their energy on work rather than coping with adverse environmental conditions.

The key to Fletcher Insulation's approach is to devise a tailored solution for each office, warehouse, and multi-use building project. We offer a range of insulation solutions that help reduce reliance on artificial cooling and heating systems and improve indoor air quality.

Working with some of the country's leading commercial building designers, we've supplied products for many offices and warehouse projects including:

- Amazon Fulfilment Centre (Jandikot, WA)
- UPS Logistics office and warehouse (Wycombe, WA)
- Lite N' Easy office and warehouse (Regency Park, SA)
- Santos workplace refurbishment (City of Adelaide, SA)
- Cummins (Perth Airport, WA)
- Bunnings (Mt Isa, QLD)
- Mission Australia offices (Coffs Harbour, NSW)
- Norco Rural Stores (Lismore, NSW)
- Metcash Distribution Centre (Gepps Cross, WA)

## Protecting people and buildings from fire

**Fire-safe workplaces protect both people and property. Designing a building to be fire-resilient means considering the needs of the people who use it every day.**

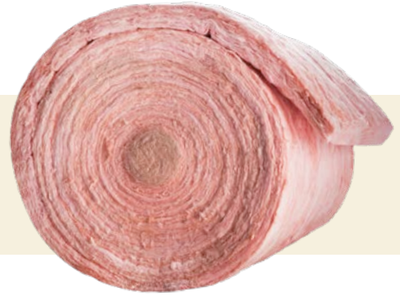
For designers of offices and warehouses, it means selecting building materials that will help keep people safe. The use of passive fire protection strategies protects a building's occupants should a fire break out in their workplace. It's also a best practice approach to mitigating property and equipment damage, and minimising interruption to an organisation's operation.

Insulation installed in external and internal walls, floors, ceilings, roofs, and around HVAC applications, is an integral part of fire safety control within any commercial building. As well as National Construction Code (NCC 2019 and 2022) compliance, designers and commercial building owners must also consider the standards and minimum requirements of insurers. Choosing insulation that fails to meet these specifications could mean higher insurance premiums.

Fletcher Insulation has developed a range of rigorously tested insulation solutions. Made of sustainable, non-combustible or low flammability materials, our products are designed to keep people and buildings safe. Whatever the specific challenge of your building design, our expert team are on-hand to help designers and specifiers select the best fire-safe solution for your building project.

Using Fletcher Insulation's glasswool products in external cladding and internal partition applications ensures your building complies with AS/NZS 1530.1 for combustibility.

**Fletcher Insulation's glasswool products are deemed non-combustible when tested to AS 1530.1, offering compliance for use in external cladding and internal partition applications, providing peace of mind.**



## For the good of the planet

**Fletcher Insulation's commitment to sustainability and protecting the environment does not begin and end with supplying energy efficient products. It begins with our manufacturing processes.**

Fletcher Insulation products:

- are ODP-free, in both the finished product and in the manufacturing process.
- contain no levels of harmful Volatile Organic Compounds (VOCs), helping to maintain indoor air quality.
- are manufactured using recycled materials wherever possible—up to 80% of the glass used in our glasswool insulation production is recycled, transforming a waste product destined for landfill into an environmental defender!


SUSTAINABLE
Made up of up to **80% recycled** content that might otherwise be destined for landfill.

**Around 80% of the glass used in our glasswool insulation production is recycled.**

# Insulation for the building envelope

**A high-performance building envelope can make a big difference to the energy efficiency of any building. It also has a significant role to play in the overall comfort of the people working within it.**

**With a holistic approach to developing the best insulation solutions for all types of commercial buildings, we consider a range of performance parameters. These include energy efficiency, thermal bridging, fire resistance, internal comfort, acoustics, moisture, air tightness, and durability.**

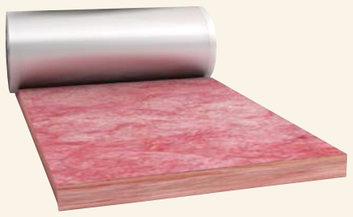
## Roofing

A typical commercial warehouse features a metal roof. Whether you're designing a multi-use space, an air-conditioned building, or an unconditioned space that is without a significant HVAC system, this can be a challenging acoustic and thermal environment.

Effective roof insulation will help minimise noise disturbance and provide a protective thermal, condensation control, and fire-resistant layer.

Fletcher Insulation has a comprehensive range of insulation solutions to meet the most demanding performance requirements for both office and warehouse buildings.

- The Permastop® range of building blankets have outstanding thermal and acoustic properties. They reduce heat transfer and minimise the internal reverberation and flow of distracting noise from outside the building, such as rain on a metal roof. They also minimise the risk of condensation that can form in metal roof cladding.
- To reduce thermal bridging, we recommend using Roof Razor® combined with Permastop®. Roof Razor® allows full recovery of the insulation blanket between the safety wire mesh and metal cladding. By combining these products, your building will you achieve optimum thermal performance and will meet or exceed NCC requirements.
- For office buildings with a concrete roof structure, your best choice is our Pink® Thermal Slab product. With excellent thermal and acoustic absorption properties, this product drives energy efficiency, and helps control noise and temperature fluctuations common to concrete roofs. Pink® Thermal Slab provides excellent fire performance for ceiling lining applications, achieving a AS 5637.1 Group 1 NCC fire classification. Further, Pink Thermal Slab holds CodeMark certification for thermal performance, ensuring confidence and certainty with the issue of a Certificate of Conformity. This certificate serves as evidence of meeting the suitability requirements outlined in the NCC.
- By specifying products from the Fletcher Insulation range, you'll guarantee the effective management of indoor temperature, moisture, and humidity for your commercial building project. Not only will this help prevent structural damage down the track, but you'll be also protecting the health of everybody using the building.



## External walls

Insulation has an important role in the health and safety of people at work. Noise disturbance in the workplace increases fatigue and distraction. This leads to error, occupational stress, and a decrease in productivity.

As well as addressing acoustic requirements, external wall insulation not only delivers on energy efficiency, it's also effective at regulating thermal conditions within the building and meeting stringent fire performance regulations.

- For warehouses with structural steel framing and external metal wall cladding, we recommend our Permastop® range of building blankets.
- The Pink® Partition range of glasswool insulation is ideal for offices with concrete external walls. With proven non-combustibility and acoustic performance, the product is installed in between wall framing. It also features a comprehensive range of R-values, densities, and thicknesses, and includes up to 80% recycled content.
- For offices with a structural steel frame and external wall cladding, we recommend our Sisalation® Vapawrap Residential Wall Wrap combined with Pink® Partition insulation between studs for colder climates. For hotter, more humid climates, specifiers use Sisalation® Multipurpose EHD (456) Sarking taped and sealed, combined with Pink® Partition insulation.
- All Fletcher Insulation glasswool insulation suitable for external walls is CodeMark certified for thermal performance.

## Concrete slabs and soffits

For offices, Pink® Thermal Slab is a highly effective soffit insulation material. It's a combination of two materials; a medium density semi-rigid glasswool board offering effective acoustic performance made from up to 80% recycled glass, and Sisalation® Heavy Duty 450 Facing Foil laminate for condensation control. The laminate is adhered to one side and is available in various thicknesses.

FletcherSpec pro®

When selecting the ideal insulation products for your design, we recommend using the FletcherSpec Pro® design specification tool. It quickly calculates Total System R-values to meet all National Construction Code (Section J) requirements. With outstanding data integrity and calculation accuracy, this handy tool is kept up-to-date with the latest NCC criteria, giving architects and specifiers complete confidence when specifying insulation products.


**Download FletcherSpec Pro® at the App Store.**

# Fitout applications

**In any commercial setting, insulation in internal walls, floors, and ceilings helps manage the acoustic environment, energy efficiency, and thermal comfort of the people working within it. Our range of fitout solutions are designed to deliver long-lasting, exceptional performance under varying environmental conditions.**

## Ceilings, partitions, services and plant rooms

Whether you're fitting out an open-plan office or a large, high-ceiling warehouse, insulation has an important role to play in the fire resilience and thermal and acoustic performance of the building.

- Specially designed for use in commercial metal-framed partitions, wall systems and suspended ceilings, Pink® Partition insulation delivers energy efficiencies through its exceptional thermal and acoustic performance. It's an ideal product for partition walls in commercial fit-out projects such as offices, schools, universities, and shopping centres where acoustic control is essential.

- Like all Fletcher Insulation glasswool insulation products, Australian-made Pink® Partition is non-combustible. Not only does it protect lives, but it also helps reduce the damage should a fire break out. This means there's less disruption to a commercial operation, and significantly lower costs should a fire occur.
- For plant and machinery rooms with stud walls where both thermal and acoustic performance is important, we also recommend FI48 Rigid insulation. FI48 Rigid Insulation is high density rigid glasswool board offering superior thermal and acoustic performance and is non-combustible (AS1530.1)
- In similar environments featuring under slab concrete soffits, we recommend Pink® Thermal Slab. As well as offering excellent fire performance, this product is highly effective in controlling the noise levels and temperature fluctuations of concrete roofs, floors, and walls.
- Acting as both a noise barrier as well as a noise absorber, Soundlag 4525C is an excellent insulation product for reducing noise break-out from pipes, valves, fan housings, and ductwork in commercial and industrial buildings.



**Made in Australia from up to 80% recycled content, the Pink Partition range is designed to meet AAAC recommendations—from low to high ratings. It's another example of how Fletcher Insulation provides architects and specifiers with the products they need to deliver optimum acoustic performance in all office and warehouse spaces.**

| Thickness mm | Density kg/m3 | Material R-value | Sound Absorption Coefficients at Frequencies (Hz) of: | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100 | 125 | 250 | 500 | 1000 | 2000 | 3150 | 4000 | 5000 | NRC | αw |
| 50 | 11 | R1.2 | 0.15 | 0.16 | 0.63 | 0.88 | 0.98 | 0.99 | 1.00 | 1.01 | 1.06 | 0.85 | 0.85 (H) |
| 50 | 14 | R1.3 | 0.14 | 0.12 | 0.59 | 0.86 | 1.00 | 1.02 | 1.02 | 0.99 | 1.04 | 0.85 | 0.85 (H) |
| 50 | 24 | R1.4 | 0.16 | 0.17 | 0.69 | 1.02 | 1.09 | 1.03 | 1.07 | 1.04 | 1.06 | 0.95 | 0.95 |
| 50 | 32 | R1.5 | 0.08 | 0.16 | 0.66 | 1.04 | 1.10 | 1.02 | 1.03 | 1.05 | 1.03 | 0.95 | 1.00 |
| 75 | 11 | R1.8 | 0.26 | 0.27 | 0.91 | 0.99 | 1.04 | 1.00 | 1.06 | 1.05 | 1.11 | 1.00 | 1.00 |
| 75 | 14 | R1.9 | 0.24 | 0.24 | 0.91 | 1.01 | 1.03 | 1.00 | 1.08 | 1.03 | 1.06 | 1.00 | 1.00 |
| 75 | 32 | R2.2 | 0.18 | 0.32 | 0.98 | 1.10 | 1.08 | 1.05 | 1.07 | 1.06 | 1.09 | 1.05 | 1.00 |
| 90 | 24 | R2.5 | 0.36 | 0.43 | 1.16 | 1.11 | 1.05 | 1.07 | 1.04 | 1.07 | 1.06 | 1.10 | 1.00 |
| 90 | 32 | R2.7 | 0.32 | 0.58 | 1.14 | 1.05 | 1.05 | 0.99 | 1.05 | 1.04 | 1.03 | 1.05 | 1.00 |
| 110 | 11 | R2.5 | 0.40 | 0.42 | 1.08 | 1.10 | 1.02 | 1.09 | 1.09 | 1.06 | 1.06 | 1.05 | 1.00 |

## HVAC

In most offices, warehouses, and multi-use buildings, Heating, Ventilation and Air Conditioning (HVAC) systems are essential to create a comfortable indoor working environment. But they're also big users of energy.

HVAC systems account for up to 50% of a commercial building's energy use and dominate peak electricity demand. The also account for a big proportion of a building's overall capital and maintenance costs.[7]

Fletcher Insulation's HVAC products help commercial businesses operate more sustainably. With proven thermal performance, our insulation products help contain the cost of heating and cooling and create a more comfortable environment for all employees.

Our sound attenuation products complete our holistic systems approach by minimising noise when the HVAC is operating. Non-combustible and safe to use, our HVAC range is flexible, lightweight, and strong, making it ideal for specifying in all your commercial building projects.


## SINIAT

When choosing building insulation materials, designers can rely on the Siniat systems, certified using insulation products by Fletcher Insulation. The Siniat range of selection tools are robust, save time and effort and include:

- **Siniat Blueprint** a handy technical manual for lightweight steel and timber frame construction; includes complete wall and ceiling insulation solutions for commercial and multi-residential projects.
- **Siniat System Selector** is an online tool that enables selection of the most appropriate and cost-effective wall and ceiling systems.
- **Siniat's library of BIM and CAD files** for all types of systems. Handy to confirm which Fletcher Insulation product is best to use in your design.

# Offices and warehouses

## Concrete construction

**Building envelope: metal clad roofing**
Permastop® Building Blanket with Roof Razor®

**Fitout: suspended ceiling**
Pink® Partition

**Building envelope: concrete roofing**
Pink® Thermal Slab

**Building envelope: external walls**
Pink® Partition

**Building envelope: external walls**
Pink® Partition

**Fitout: between floors and underslab**
Pink® Thermal Slab

**Fitout: internal partition walls**
Pink® Partition

# Offices and warehouses

## Steel construction

# Offices and warehouses

## For superior thermal and acoustic building design

# Selecting Fletcher Insulation products for offices and warehouses

| Product selection | Product description | Roofing | External walls | Internal walls | Ceilings, partitions and services | Slabs and soffits | HVAC |
|---|---|---|---|---|---|---|---|
| **Roof Razor®** | An insulation spacer specifically designed for metal roof construction. It sits between the roof structure and the external cladding, creating a space for insulation to recover to its full nominal thickness, reducing thermal bridging. **Roof Razor** is a spacer solution to meet the Section J requirement of the National Construction Code (NCC) where insulation must maintain its position and thickness between purlins forming a continuous thermal barrier. | ✓ | | | | | |
| **Roof Safety Mesh** | **Roof Safety Mesh** keeps the insulation blanket in place, provides fall protection for roofing installers and offers long-term fall protection for maintenance and repair workers. Complies with the requirements of Australian Standard AS/NZS 4389 for safety mesh and with all Australian State and Territory Codes of Practice (Safe Work on Roofs Part 1: Commercial and Industrial Buildings). | ✓ | | | | | |
| **Permastop® Building Blanket** | Suitable for use in commercial and residential metal roof applications. The product is also suitable for wall applications in commercial steel frame construction. Permastop® can also be used in under slab concrete soffit applications, when installed behind a ceiling or wall lining. Provides effective thermal and acoustic performance by reducing heat transfer and minimising the internal reverberation and flow of unwanted nuisance noise generated from adjacent buildings/rooms and/or the external environment. Additionally, **Permastop Building Blanket** aids in minimising the risk of condensation that can form with metal cladding. | ✓ | ✓ | | | ✓ | |
| **Permastop® Tropic Building Blanket** | Specifically designed for use in Australia's hot and humid tropical regions to provide increased condensation protection to buildings. In these regions, it is customary to install the vapour barrier on the upper side of the building blanket which faces the roof sheet. This ensures the vapour barrier is installed on the warm side of the building to provide greater protection against the risk of condensation. | ✓ | | | | | |
| **Pink® Partition** | Designed for use in commercial metal framed partitions, wall systems and ceilings, **Pink Partition** insulation delivers exceptional thermal and acoustic performance, contributing to the effective construction of comfortable, energy efficient commercial buildings. It is typically used in partition walls of low and high rise buildings and commercial fit-outs such as offices and warehouses where acoustic control is essential. Pink Partition may also be used as a ceiling overlay for enhanced thermal and acoustic performance. The range encompasses multiple densities, thicknesses and dimensions to suit commercial steel framed studs and to satisfy a broad spectrum of building requirements. Specification and installation of Australian made Pink Partition insulation enables designers and builders to satisfy National Construction Code (NCC) requirements pertaining to Energy Efficiency, Sound Insulation Provisions and Fire Resistance Performance. | | ✓ | ✓ | ✓ | | |
| **Pink® SonoMatt Blanket®** | Suitable for applications such as partitions, screens and baffles. The black tissue facing makes it ideal for installation behind perforated linings to improve the overall acoustic properties of the internal lining. In addition to providing exceptional acoustic performance, **Pink SonoMatt Blanket** provides the added benefit of thermal insulation and increases the overall Total R-value of a building envelope, thus improving the energy efficiency of a building. This allows architects and specifiers to satisfy both thermal and acoustic design requirements with the specification and installation of a single product. | | | | ✓ | | |
| **Pink® Thermal Slab** | Suitable for use in commercial under slab soffit applications where thermal and acoustic properties are pivotal in controlling noise levels and temperature fluctuations of concrete roofs, floors and walls. **Pink Thermal Slab** provides excellent fire performance for ceiling lining applications achieving a AS 5637.1 Group 1 NCC fire classification, and delivers excellent thermal performance, which in turn improves the energy efficiency of a building. It also provides the added benefit of exceptional acoustic absorption, which allows architects, specifiers and builders to satisfy both thermal and acoustic design requirements through the specification and installation of a single product. | | | | | ✓ | |

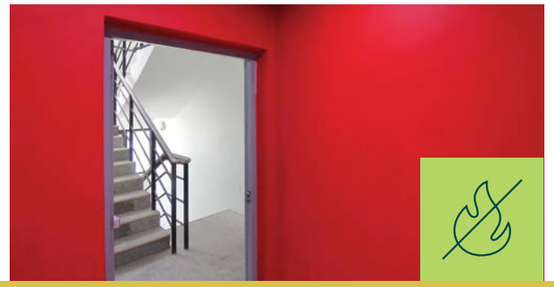
# Selecting Fletcher Insulation products for offices and warehouses

| Product selection | Product description | | Roofing | External walls | Internal walls | Ceilings, partitions and services | Slabs and soffits | HVAC |
|---|---|---|---|---|---|---|---|---|
| **FI32 Semi-Rigid** | The medium density specification of FI32 boards and blanket (32kg) provides excellent thermal properties and NRC acoustic values making it suitable for internal and external walls, and roofing systems where a high degree of acoustic performance is required. Available in both roll or board form to allow for greater design flexibility in commercial building applications including HVAC ducting applications. Also suitable for insulating storage tanks, process vessels, appliance cabinets, electrostatic precipitators, plant rooms and for use in the manufacture of acoustic baffles. | | | ✓ | ✓ | | ✓ | ✓ |
| **FI48 Rigid Board** | The higher density specification of FI48 boards (48kg) provides greater thermal properties and NRC acoustic values making it suitable for internal and external walls, and roofing systems where the highest degree of acoustic performance is required for the building's design. Also suitable for HVAC ducting applications, insulating storage tanks, process vessels, appliance cabinets, plant rooms and for use in the manufacture of acoustic baffles. | | | ✓ | ✓ | | | ✓ |
| **Sisalation® Foam Cell Multipurpose** | Designed for use in wall and roof applications, Sisalation Foam Cell Multipurpose is an extra heavy duty 3-in-1 multipurpose sarking solution: insulation + thermal break + vapour barrier with a Group 2 fire hazard property rating. Ideal for use in NCC Building Classifications 2 to 9, it can reduce up to 95% of the sun's radiant heat, minimises the risk of condensation and acts as an effective water and vapour barrier when installed according to AS/NZS 4200.2. | | ✓ | ✓ | | | | |
| **Sisalation® Metal Roof MD (433) and HD (453)** | Suitable for use as vapour and water barrier sarking solutions in commercial and residential metal roof and wall applications, where the metal roof span does not exceed 900mm unsupported or is 1200mm or less supported. Designed to provide an effective approach to managing condensation in the roof space by creating a vapour barrier and assist in minimising draughts, enabling bulk insulation to perform more effectively. Additionally, they provide an effective secondary skin against moisture, vapour, wind, heat and dust penetration. | | ✓ | ✓ | | | | |
| **Sisalation® Vapawrap™ Vapour Permeable Metal Roof** | Suitable for use as a vapour permeable roof sarking solution in commercial and residential metal roof applications in Australia's colder climate zones, where the metal roof span does not exceed 900mm unsupported or is 1200mm or less supported. Provides an effective approach to managing condensation in the roof space by allowing the controlled escape of moisture from within the building. It also restricts the ingress of liquid water and dust from the outside environment and assists in minimising draughts, enabling bulk insulation to perform more effectively. | | ✓ | ✓ | | | | |
| **Sisalation® Vapawrap™ Vapour Permeable Residential Wall Wrap** | Suitable for use as a vapour permeable wall wrap solution in low rise commercial and residential applications in Australia's colder climate zones. Designed for walls and gable applications in brick veneer and behind fibre cement cladding. Provides an effective approach to managing condensation in walls by allowing for moisture vapour inside the structure to escape, and assists in minimising draughts, enabling bulk insulation to perform more effectively. | | | ✓ | | | | |
| **Sisalation® Tuff Wrap™ Wall Wrap (497)** | Suitable for use as a vapour and water barrier wall wrap solution in commercial and residential brick veneer wall applications. Designed to act as a barrier that helps prevent water vapour from entering the building, as well as restricting the ingress of liquid water and dust from the outside environment, and assisting in minimising draughts for more effective bulk insulation performance. | | | ✓ | | | | |
| **Quadzero Loaded Vinyl Barrier** | A foil faced flexible acoustic barrier highly suitable for inside cavities or over lightweight wall, ceiling and floor constructions. Ideal for auditorium theatres, partitions and meeting rooms. | | | | | ✓ | | ✓ |

For information on HVAC products, please contact Fletcher Insulation.

# Compliant building performance

**Fletcher Insulation conducts extensive research and product testing ensuring all our products and solutions are compliant with the latest standards and building code requirements.**



## Fire

**Safety is paramount in building design, with the reduction of fire hazards and prevention of spread of fire considered critically important for designers of offices and warehouses, especially considering the risk of evacuating employees in the event of a fire.**

Our specialists will advise you on passive fire prevention requirements for roofs, external wall construction, internal wall systems and HVAC services, including:

- **AS 1530.1** Combustibility **NCC 2022 Vol 1** C2D10
- **AS 1530.2** Flammability of materials **NCC 2022 Vol 1** C2D10, C2D11 & Specification 7
- **AS/NZS 1530.3** Fire Hazard Properties **NCC 2022 Vol 1** C2D11 & Specification 7
- **AS 5637.1** Fire hazard properties (Group No) for wall and ceiling lining materials **NCC 2022 Vol 1** C2D11 & Specification 7
- **AS 3959** Bushfire Construction up to BAL–FZ

Our products and solutions are compliant to the above relevant standards and safe for use in external cladding and internal partition applications, offering peace of mind and permitting architects to express design freedom in selecting cladding and partition materials.

## Thermal performance

**It is well established that thermal comfort contributes enormously to the well-being of building occupants, which is most critical in office and warehouse environments. With the breadth of climate zones across Australia we make sure your design works whether in the extreme heat, extreme cold, or somewhere in between.**

We also offer advice on NCC Class 5 (offices) and Class 7b (warehouses) thermal compliance, upgrade specifications and for general installation to deliver healthier and more sustainable outcomes.

Our Bulk Insulation products comply with:

- **AS/NZS 4859.1** Materials for the thermal insulation of buildings
- **AS 3999** Thermal Insulation of dwellings—Bulk insulation—Installation requirements
- **AS 4254** Part 1 and Part 2 Ductwork for air-handling systems in buildings
- **AS 4508** Thermal resistance of insulation for ductwork used in building air-conditioning
- **NCC 2022 Vol 1** Part J4D2 - J4D4, J4D6–J4D7 and J6D6

Building membranes/wraps specification and installation compliance with:

- **AS/NZS 4200.1** Pliable building membranes and underlays—materials
- **AS 4200.2** Pliable building membranes and underlays—Installation requirements
- **NCC 2022 Vol 1** F3D3

## Acoustics

**Working environments have their own set of demands when it comes to the acoustic treatment of walls, ceilings, and services. Our solutions deliver peaceful environs for employees.**

Our products assist in reducing airborne sound through ductwork, and wall and floor construction, in accordance with:

- **AS/NZS ISO717.1** Acoustics—Rating of sound insulation in buildings and of building elements
- **AS/ISO 11654** Acoustics—Rating of sound absorption—Materials and systems
- Project specific high-performance acoustics

Our high density acoustic insulation helps target broad spectrum frequency bands for all round acoustic attenuation in:

- Specialised plant and server rooms
- Open office environments
- HVAC ductwork

## Condensation and moisture management

**With the vast contrasts in climates and myriad construction systems available, specifying the correct material layers can be very challenging.**

We help identify which systems work best in different climates to avoid interstitial condensation—leaving the worry and specification details to us.

We can assist in compliance with:

- **AS/NZS 4200.1** Pliable building membranes and underlays—materials
- **AS 4200.2** Pliable building membranes and underlays—Installation requirements
- Moisture control membranes tested to **ASTM-E96** (Vapour control) and compliant with **AS 4201.4** (Water control)
- **NCC 2022 Vol 1** Part F8D3
- Project specific humidity control

Our membranes and insulation systems can be tailored for vapour permeable or barrier construction, with nominated air control layers and air-tight tapes, so you don't have to worry about matching project specific climatic and/or humidity control requirements.

# Compliance and design assistance

**Fletcher Insulation is an active member of the Green Building Council of Australia (GBCA)**, exceeding 10 years of recognition for our commitment to providing energy efficient insulation and acoustic solutions to the residential, commercial and HVAC markets.

**As a long-term member of the GBCA**, we are upholding our commitment to providing products for a sustainable built environment. As a GBCA member it enables us to contribute our technical and commercial expertise to the development of new Green Star rating tools and obtain access to all Green Star information. This information includes project directories, technical guidelines to support and/or assist our customers with Green Star project submissions and example submissions. The benefit to architects and specifiers, is that they can meet and raise the Green Star rating of their building projects by incorporating our range of Fletcher Insulation products.

**WELL is the leading tool for advancing health and well-being in buildings globally.** Fletcher Insulation can provide you with advice and solutions to help you deliver improved results in the areas of air quality, thermal comfort and sound.

**CodeMark Certificate of Conformity 30006**

Fletcher Insulation has a comprehensive range of glasswool products that are CodeMark certified for thermal performance. This product certification is designed to provide confidence and certainty to regulatory authorities and the market through the issue of a Certificate of Conformity. It is one of several options available for meeting the 'evidence of suitability' requirements of the National Construction Code (NCC). Importantly, our CodeMark 30006 certification:

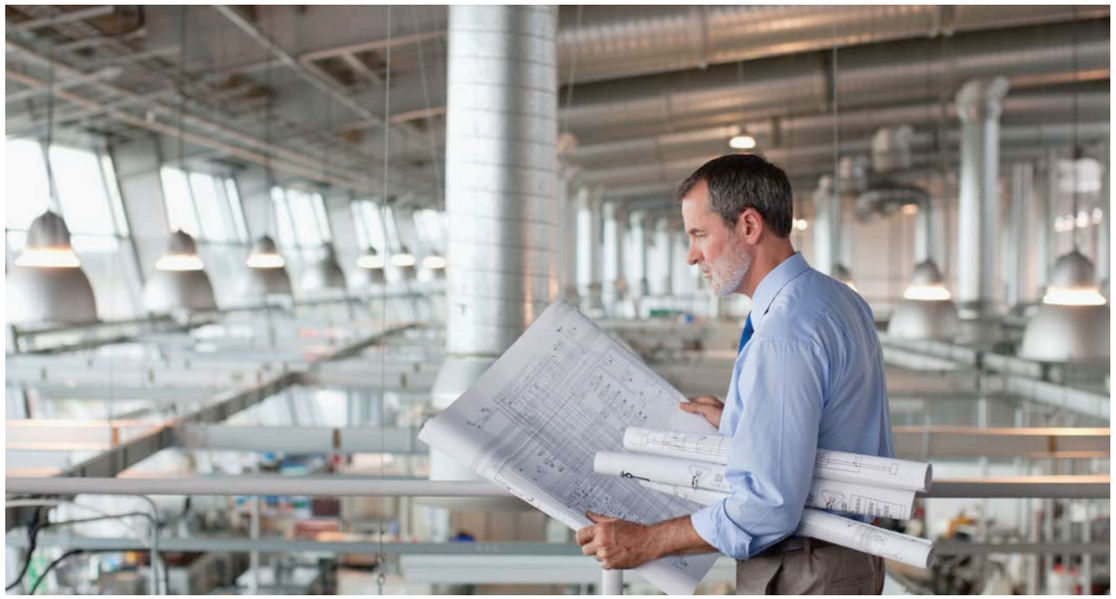
- proves the listed products meet the evidence of suitability requirements of the NCC
- ensure they are capable of performing as intended
- streamline the building consent and inspection process

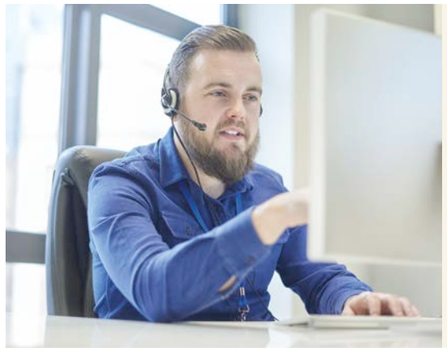
Further, they are listed on the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) register.


FletcherSpec pro® Total R-Value Calculator

**FletcherSpec Pro®** is a Fletcher Insulation app developed to overcome many traditional issues architects and builders face when specifying insulation. The app provides a near complete support structure, guiding users through the entire insulation specification process.

**FletcherSpec Pro®** delivers centralisation of the multitude of tasks associated with typical System R-value calculations including but not limited to; determining the relevant climate zone, referencing applicable energy efficiency requirements, considering solar absorption values of roof cladding and selecting the correct insulation products for the application. This drastically minimises the need to manually cross reference inconsistent or out-dated handbooks, technical data sheets and so on. Instead, users simply answer a series of targeted questions which the app uses to determine relevant energy efficiency requirements as outlined in the National Construction Code Deemed to Satisfy provisions. The app then progresses to calculate the Total R-value of the design based on the inputs entered by the user.





## Technical support

Fletcher Insulation's Technical Service is an invaluable resource for architects and specifiers. Our insulation experts understand what's needed to satisfy a diverse range of building applications, including the complex requirements of the education and health sectors. Providing the right advice when you need it, our technical service team has quality solutions to help solve your building insulation challenges.

**Contact Fletcher Insulation on 1300 654 444 or email technical@insulation.com.au**

## Technical Data Sheets and Installation Guidelines

Visit **insulation.com.au** to discover the excellent array of technical information available to download, whether you need to get into the product details yourself, or reassure the project team that our products are compliant, and safe and easy to install.

## REFERENCES


1 Woo, J., Rajagopalan, P., Francis, M. and Garnawat, P., (2021), An indoor environmental quality assessment of office spaces at an urban Australian university, Building Research & Information (2021) Vol. 49, No.8, 842.

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6 Association of Australasian Acoustical Consultants Guideline for Commercial Building Acoustics V2.0, November 2020, https://aaac.org.au/Guidelines-&-Downloads.

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# Addendum:
# Commercial buildings acoustic requirements

## Extract from Association of Australasian Acoustical Consultants Guideline for Commercial Buildings V2.0.

**Table 1: Acceptable Dw values depending on a room's noise level and the tolerance in the adjacent space**

| Noise tolerance in receiving room | Source room activity noise | | | |
|---|---|---|---|---|
| | Low | Average | High | Very high |
| High | 30 | 35 | 40 | 45 |
| Medium | 35 | 40 | 45 | 50 |
| Low | 40 | 45 | 50 | 55 |
| Very low | 45 | 50 | 55 | 60 |

For guidance on expected noise source levels and tolerance for various room occupancies refer to Table 2 below.

**Table 2: Room noise source levels and tolerance**

| Type of occupancy/activity | Source activity level | Noise tolerance |
|---|---|---|
| Board and conference rooms | High | Very low |
| Cafeterias | Very high | High |
| Call centres | Average–high | Low–medium |
| Computer (server) rooms | High | Medium–high |
| Corridors and lobbies | Average | High |
| Design offices | Average | Low |
| Drafting offices | Average | Low |
| General office areas | Average | Medium |
| Private offices | Low | Low |
| Public spaces | Average | High |
| Reception areas | Average | Medium |
| Rest rooms and tea rooms | High | High |
| Toilets | Average | High |
| Undercover car parks | Very high | High |

**Table 3: Performance requirements between separate tenancies where space use is unknown**

| Weighted sound reduction index (Dw) | | | | |
|---|---|---|---|---|
| Poor | Average | Good | Very Good | Excellent |
| 35 | 40 | 45 | 50 | 55 |

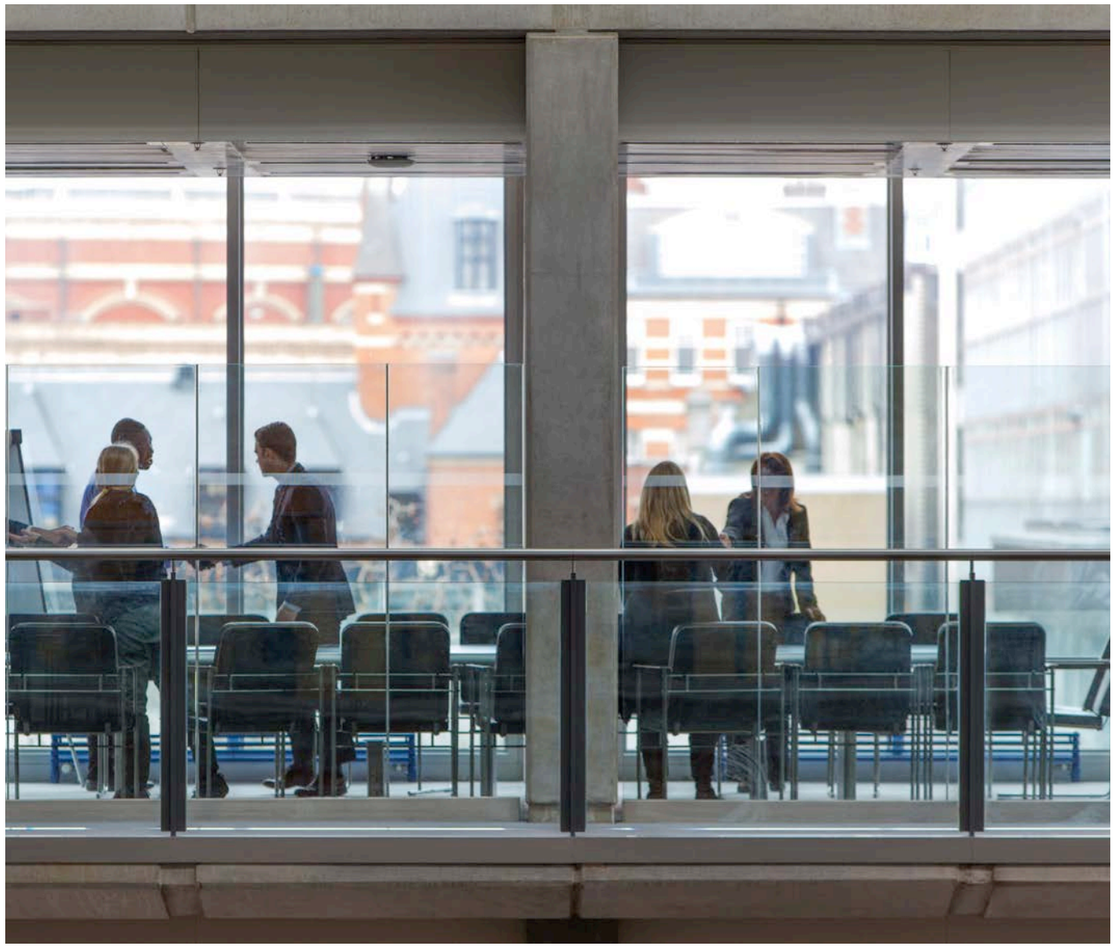
Table 3 provides acoustic quality as it relates to the quality of the development and where the use of the spaces either side of a common wall is unknown.

**Table 4: Performance requirements within the same tenancy where space use is yet to be defined**

| Weighted sound reduction index (Dw) | | | | |
|---|---|---|---|---|
| Poor | Average | Good | Very Good | Excellent |
| 30 | 35 | 40 | 45 | 50 |

Table 4 above provides acoustic quality as it relates to the quality of the development and where the use of the spaces on each side of the wall is yet to be defined, otherwise Table 1 can be used.

For office areas where walls do not extend full height, the ceiling selected will also become critical.



# Fletcher Insulation

Building Better, Together

**For more information:**

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visit **insulation.com.au**


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