

Creating sustainable, healthy and more comfortable residential sheds

Residential sheds have become more than just large storage spaces—they're now offices, studios, workshops, man caves and even tiny homes. Insulation transforms these structures into sustainable, healthy, and comfortable environments. By enhancing energy efficiency, managing indoor air quality, and reducing environmental impact, insulation ensures your residential shed is a space you can truly enjoy.

Why insulate?

Thermal comfort

Insulation helps regulate indoor temperatures inside a residential shed by minimising the transfer of heat between the interior and exterior of a building. This means that in hot weather, insulation plays a significant role in maintaining a cooler indoor environment, and in cold weather, in retaining heat.

Acoustic comfort

In residential shed spaces, unwanted noise can disrupt the tranquillity of a residential shed. Whether the source is external (such as from traffic, construction, and machinery) or internal (heating and cooling, machinery, loud music), any type of noise leads to poor sound quality within a shed. Our insulation solutions play a crucial role in walls and roofing by reducing unwanted noise. This will create a shed that is a quiet retreat, perfect for work or relaxation.

Condensation management

Condensation refers specifically to the process of water vapour changing its state to liquid water. This occurs when warm, moist air comes into contact with a surface that is cooler than the dew point of the air. The water vapour in the air then condenses into liquid water on the cooler surface.

Insulation helps manage temperature differentials between the interior and exterior, reducing the risk of condensation and protecting your shed from moisture-related issues.

Our quality building membranes are tested to Australian Standards for water and vapour control which assists with condensation management in differing ways depending on the climate, building application and specific project requirements. Other key factors that need to be considered for condensation management include; ventilation and solar absorption. We recommend consulting a building designer for the best approach to vapour control for your project.

Fire safety

Specially engineered to protect people and valuables from the impact of fire, low flammability building membranes (wall wraps and roof sarkings), act as critical barriers, slowing down the spread of fire and allowing occupants valuable time for safe evacuation. This proactive approach is fundamental for saving lives during fire emergencies and protecting your valuables.



Product recommendations for Residential Shed Applications

Roofing

Selecting the right roof insulation depends on factors like local climate, construction type, and the materials used for the roof, as well as any heating and cooling systems installed in a residential shed.

Roof insulation helps in multiple ways. It reduces external noise, aids in managing condensation, cuts down on draughts, and forms a protective thermal layer with low flammability.

Blocking out up to 95% of radiant heat, our Sisalation® Foam Cell Shed Liner will protect belongings in residential storage sheds, garages and workshops, keeping things cooler even in hot and humid conditions. Rated as Extra Heavy Duty (EHD), this strong and durable insulation material will also help manage condensation in roof spaces.

Sisalation® Foam Cell Multipurpose is also recommended where the building design requires. This extra heavy duty 3-in-1 multipurpose building membrane provides an R0.25 R-value, a thermal break and a vapour barrier. Suitable in roofs with a Bushfire Attack Level (BAL) of 12.5–40 and walls with a BAL of 12.5–FZ in accordance with AS 3959.

Resituff™ Building Blanket is a light duty (LD) polyweave faced building blanket suitable for residential shed roofing applications that demand higher thermal and acoustic performance and align with the specific requirements of the building design.

When selecting Resituff Building Blanket for roofing in a residential shed application, it is essential to appropriately design as part of a construction system to ensure proper condensation management throughout the structure.

External Walls

Insulating your shed's external walls can provide numerous benefits that go beyond just temperature control. Wall insulation can save on heating and cooling costs in habitable residential sheds, sheds are also prone to condensation, especially during temperature fluctuations. Moisture buildup can lead to mould, mildew, and damage to the structure or stored items. Insulating the walls creates a barrier that helps manage condensation, protecting both your residential shed and its contents.

Plus insulation, also helps dampen intrusive external noise, helping to maintain peaceful shed conditions. It's effective at regulating thermal conditions within the shed environment and meeting strict fire safety rules. This means your residential shed becomes a comfortable environment for work, storage, or relaxation all year round.

Our Sisalation® Foam Cell Shed Liner is suitable in external walls for residential sheds, garages and workshops, keeping things cooler even in hot and humid conditions. Rated as Extra Heavy Duty (EHD), this strong and durable insulation material will also help manage condensation in external walls.



Sisalation® Foam Cell Multipurpose is also recommended where the building design requires. This extra heavy duty 3-in-1 multipurpose building membrane performs as insulation, a thermal break and a vapour barrier in residential shed walls. Sisalation® Foam Cell Multipurpose achieves a material R-value of R0.25 deeming it suitable for use as a thermal break for steel framed constructions in accordance with National Construction Code (NCC) requirements. When installed correctly, Sisalation® Foam Cell Multipurpose will act as an effective water and vapour barrier and will aid in managing condensation in external walls.



For other climate zones and applications, the Fletcher Insulation Technical team can assist architects and specifiers with the right building membrane for the project.

There are many aspects to consider when selecting the correct material for your shed building, the below table can be used to select the product right for your application by choosing which features you need.

For more detail on some of the considerations refer to our Technical Bulletin that addresses insulation requirements in climates that are more prone to condensation issues:
Key considerations for insulation in cooler climates.

Product	Reflects radiant heat	Reduces drafts	Thermal break	Acoustic benefit	Thermal R value Benefit
Sisalation Shed liner	✓	✓	✗	✗	✓+
Sisalation Foam Cell Multipurpose	✓	✓	✓	✗	✓+
Resituff™ Building Blanket*	✓	✓	✓	✓	✓

+ R Value on external walls can increase when unventilated air gap present on both sides of the product.

* If selecting the Resituff Building Blanket for a roofing application in a Residential Shed application **it is essential** to appropriately design as a system to ensure proper condensation management throughout the structure. Please refer to the Resituff Building Blanket installation guide on insulation.com.au

IMPORTANT NOTE:

Critical in any building design or if the use of the building significantly changes is to reach out to a qualified building designer to check maximum thermal efficiency can be achieved while managing condensation.

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