



CORE-FILL INSULATION

Perlite for Hollow-Core Aussieblock

A simple, permanent way to turn the open cores of Aussieblock retaining and wall units into a built-in thermal and acoustic barrier — covering both the Butterstick and Regular Meter lines.

What Is Perlite?

Perlite is a naturally occurring volcanic glass. When the raw ore is heated, the water trapped inside it flashes to steam and “pops” the rock the same way a kernel of corn expands — swelling it up to twenty times its original volume. The result is a clean, lightweight granular material made up of countless sealed air pockets. Those trapped pockets of air are what make perlite such an effective insulator, and they do not break down over time.

As an insulation fill it is hard to beat. It is extremely lightweight — roughly 2 to 8 pounds per cubic foot — completely inorganic, and chemically inert. It will not rot, will not feed mold or insects, and rodents have no interest in it. Because it is glass, it is also non-combustible: it will not burn or give off smoke. And it pours freely into tight spaces with no special equipment.

Why Pour It Into the Cores

Every hollow-core unit leaves vertical voids running through the wall once it is stacked. Left empty, those voids do little but let heat and sound pass straight through. Filling them with loose perlite closes that path: the air-filled granules slow heat transfer through the wall and dampen sound, all without adding meaningful weight to the units or the footing.

Thermal Insulation

Sealed air pockets slow heat moving through the wall — cooler in the San Angelo summer, warmer on cold nights, and lower energy costs for anything the wall encloses.

Sound Dampening

Filled cores add mass and break up the air path, knocking down road and yard noise — a real benefit on screening and boundary walls.

Fire Resistant

Expanded glass is non-combustible: no flame, no smoke, no fuel. It adds a layer of fire protection inside the wall at no extra effort.

Permanent — No Settling

An inert mineral that holds its volume. It will not rot, compress into mush, or need topping up over the life of the wall.

Lightweight

At only a few pounds per cubic foot it insulates without overloading the block, the wall, or the foundation beneath it.

Pest & Mold Proof

Fully inorganic, it offers nothing for insects, rodents, or mold to live on — unlike many organic insulation fills.



Both Block Lines

Perlite core-fill works the same way across the Aussieblock range. Whichever line a wall is built from, the open cores are filled after the units are laid — no change to how the wall goes up.

Butterstick Line

The hollow-core profile leaves clean vertical voids ready to receive loose perlite as the wall rises, turning each course into part of a continuous insulated barrier.

Regular Meter Line

Larger core volume per unit means more perlite per square foot of wall — and a correspondingly stronger thermal and acoustic benefit once the cores are filled.

How It Goes In

Filling the cores is a single added step during normal wall construction — no specialty crew or equipment required.

- 1. Lay the block as usual.** Build the wall to your normal coursing. The vertical cores line up into continuous channels as the units stack.
- 2. Pour perlite into the cores.** Once a few courses are up, pour loose perlite straight from the bag into the open cores. It flows down and fills the voids on its own.
- 3. Rod or tap lightly to settle.** A light tap or rod settles the granules fully so there are no gaps.
- 4. Keep filling as the wall rises.** Top off the cores as you add courses so the fill stays continuous to the cap.
- 5. Cap the wall.** Finish with your cap units to seal the top of the filled cores and keep weather out of the insulation.

Water Won't Damage It

Because perlite is volcanic glass, getting wet does it no harm — it will not rot, dissolve, break down, or grow mold, and it does not lose strength or settle when moisture reaches it. If water gets into the cores, the perlite simply drains and dries and regains its full insulating value. Keeping the wall capped and the normal drainage details working helps the cores dry quickly, but an occasional soaking will never ruin the fill.

At a Glance

Material	Expanded volcanic glass (inorganic mineral)
Typical density	~2–8 lb/ft ³ — very lightweight
Best used for	Loose core-fill in hollow-core Aussieblock units
Key benefits	Thermal insulation, sound dampening, fire resistance
Lifespan	Permanent — inert, non-settling, pest- and rot-proof
Install	Pour-in during construction; drains and dries if wet — not water-damaged



THERMAL PERFORMANCE

R-Value: Putting a Number on It

R-value is the standard measure of how well a material resists heat flow — the higher the number, the better the insulation. Here is what perlite core-fill adds to an Aussieblock wall, in plain numbers.

R-2.7 per inch

Typical insulating value of masonry-grade expanded perlite. Published values run R-2.5 to R-3.7 per inch depending on density.

≈ R-1 total

What an empty core is worth. Still air in an open void adds about R-1 no matter how deep the core is — the space is wasted.

2× or better

Typical whole-wall improvement when the cores of hollow-core masonry are filled with perlite, per published industry data.

What the Fill Adds Through the Core

Perlite stacks up fast inside the block. Through the core path itself, every inch of fill adds about R-2.7:

Fill depth in the core	Insulation added through the core path
4 inches of perlite	≈ R-11
6 inches of perlite	≈ R-16
8 inches of perlite	≈ R-22

Face shells and cross-webs still carry some heat around the fill, so the finished wall tests lower than the core path alone — that is normal for all filled masonry.

What It Means for the Whole Wall

Published industry data for standard hollow-core masonry shows an unfilled 8-inch block wall at roughly R-2 to R-3. Fill the cores with perlite and typical values climb to roughly R-5 to R-8 — double the insulating value or better, from one added step during construction. Because the Regular Meter line has more core volume per square foot of wall, it sees the largest gain; the Butterstick line follows the same pattern in a tighter profile.

Figures are typical published values for perlite loose-fill in hollow-core masonry (Perlite Institute). Exact wall values vary with unit geometry, block density, and finish details.

The takeaway for a customer: an Aussieblock wall with perlite-filled cores is not just a fence or a screen — it is an insulated assembly. On a pool enclosure, a shop wall, or a boundary wall around outdoor living space, that means less heat soaking through in the San Angelo summer, warmer surfaces on cold nights, and quieter space behind the wall.