



BUILD · MATERIALS

What Bali villas are built from: concrete, blockwork, teak and bamboo, and what each costs

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The name of a material in a brochure says little about how a villa will stand up to earthquakes, rain and termites. Here's what Bali builders actually use, what the studies show and what to ask before you pay.

Read online: <https://riserealbali.com/guides/bali-villa-construction-materials/>

IN SHORT

Most Bali villas stand on a cast-in-place reinforced concrete frame designed to the SNI 1726:2019 earthquake standard, with blockwork walls and a metal or concrete roof. Teak, merbau and bamboo go into joinery, ceilings and pavilions. A 50 kg bag of cement cost Rp 63,000–70,000 in March 2026 (Medcom), and BPS recorded a 9.52% rise in construction material prices over the twelve months to August.

**Rp 63,000–
70,000**

a 50 kg bag of cement,
March 2026 (Medcom)

**Rp 500,000–
800,000**

hebel blocks per cubic
meter, 2026 (Mamikos)

+9.52%

wholesale construction
materials, year to August
2026 (BPS)

47–52 MPa

compressive strength
of Bali's petung and
tali bamboo

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What are Bali villas built from?

Most are built the same way: a cast-in-place reinforced concrete frame, blockwork walls between the columns, and a roof of metal tile, concrete tile or a flat slab. Wood and bamboo mostly sit where you can see them, in doors, ceilings, terraces and pavilions. No register records materials building by building, so this describes practice, not statistics.

A villa isn't one material. The word on the render rarely tells you what carries the load. Start with the frame, because everything else can be repaired or swapped without touching the structure.

Typical materials by building part

PART	USUAL MATERIAL	WHY
Frame	Cast-in-place reinforced concrete: columns, beams, slabs	Calculated for earthquake loads
Walls	Red brick, batako or hebel blocks, plastered	Cheap to lay, and they fill the frame
Roof	Metal tile, concrete tile or flat slab; thatch on bungalows	Light, watertight, quick to fit
Doors, ceilings, terraces	Teak or merbau	Look and natural durability
Pavilions, pergolas	Bamboo or timber	Style, and lower load

Source: Rise Real Bali building practice, 2023–2026; no official register of building materials exists

Why is the frame concrete, and what is it designed to?

Bali sits in an earthquake zone, so a structure is designed for sideways shaking as well as weight. Indonesia's seismic design standard is SNI 1726:2019. It replaced the 2012 edition, rests on the 2017 national hazard map and adopts provisions from the American standard ASCE 7-16. Reinforced concrete is the default frame because engineers can calculate it for that load.

Ask the developer for the structural drawings and the calculation behind the building approval (PBG), not only the finish schedule. Our PBG and SLF guide explains what inspectors check, and the due diligence checklist puts the documents in order.

Source: SNI 1726:2019 and its basis, per Universitas Syiah Kuala, Jurnal Teknik Sipil; PP 16/2021 on buildings

03 / 09

Which wall material is cheapest in Bali: brick, batako or hebel?

In the one Bali cost comparison we found, batako (concrete block) was cheapest. Red brick came out 6% dearer, and hebel (autoclaved aerated concrete) 26% dearer. The study priced the walls of a school building in Denpasar three ways (ASTONJADRO, vol. 15, 2026), so it covers one building, not a villa. Read it as a ranking, not a price list.

Hebel is lighter and comes in bigger units, so a mason lays it faster. It still lost on cost in that project. Blocks sell at Rp 500,000–800,000 per cubic meter, which works out at about Rp 7,200 for a standard 60 × 20 × 10 cm block at Rp 600,000 (Mamikos, 2026).

Cement, the other staple, ranged from Rp 63,000 for Padang to Rp 70,000 for Gresik and Tiga Roda per 50 kg bag in March 2026 (Medcom). Wholesale construction prices ran 9.52% above August 2025 (BPS), so treat any quote older than a year as stale. Our cost to build guide shows how the budget splits.

Cost of the walls of one school building in Denpasar, three materials

WALL MATERIAL	COST	AGAINST BATAKO
Batako	Rp 402 mn	—
Red brick	Rp 426 mn	+6 %
Hebel	Rp 508 mn	+26 %

Source: Astariani et al., Comparison of Wall Construction Costs Using Brick, Batako, and Hebel in Denpasar City, ASTONJADRO vol. 15 no. 2, 2026; percentages are our arithmetic; Mamikos hebel price guide, 2026; Medcom, March 2026; BPS wholesale price index, August 2026, via GoodStats, September 8, 2026

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What roof works best in Bali's rain?

Metal tile is the budget answer, and thatch is the premium one. A 2023 Politeknik Negeri Bali project priced seven roof types for a market building and found plain metal tile cheapest. The dearest of the seven cost 47% more, and concrete tile sat in the middle of the pack. The study used 2021–2022 prices, so trust the ranking and not the rupiah.

Thatch (alang-alang) sells the look. Laying it runs about Rp 350,000 per m², and it needs replacing every five to ten years. In the rainy season the roof also doubles as the drainage system, so slope and gutters matter as much as the tile.

Source: Politeknik Negeri Bali, roofing material cost analysis, final project report, 2023; Pablo Luna Studio, July 5, 2024, on thatch cost and lifespan

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Teak or merbau: which timber for doors, ceilings and decks?

Both are good timbers under cover, and neither is a cheap shortcut. Teak is lighter and stays stable as it dries. Merbau is denser and rates higher for durability above ground. The label matters less than the grade, the moisture content and where the log came from.

Most teak sold today comes from plantations, and CIRAD notes that its durability varies with the age and origin of the stand. Merbau comes mainly from natural stands, and TRAFFIC's 2009 review flagged illegal trade and sustainability concerns in its range states, Indonesia among them. So ask the supplier for the SVLK legality document. Since January 2013 it's been mandatory for every business in Indonesia's timber chain.

Wood prices move slowly. BPS's wholesale index for timber beams rose 0.82% in June 2026 and the board index 0.12% in July. We found no public price per cubic meter for sawn teak or merbau in Bali, so get quotes against your own cutting list.

Teak and merbau compared

	TEAK	MERBAU
Density	About 670 kg/m³	About 830 kg/m³
Resistance to decay	Class 1 to 3, by stand and age	Class 1 above ground, class 3 in the ground
Termites	Moderately durable	Resistant
Where it comes from	Mostly plantations	Mainly natural stands

Source: CIRAD Tropix, Teak, 2023; Queensland Department of Agriculture, merbau timber factsheet; TRAFFIC Southeast Asia, Review of trade in merbau, 2009; OECD OPSI on SVLK; BPS wholesale price indices for timber, via Katadata, June and July 2026

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How much does a bamboo villa cost in Bali?

No public price list exists, and we won't invent one. Bukit Vista dropped its per-m² ranges from its August 2026 construction guide because they lacked transparent sourcing. Structural bamboo is designed and built to order, so the only honest number is a bill of quantities for your drawings.

The evidence on strength is better than the evidence on price. Two local species, petung and tali, test at 47–52 MPa in compression and suit low-rise building. The same study says traditional preservation, which means soaking in seawater, smoking and wooden pegs, needs modernizing with grading, bolted joints and protective coatings. IBUKU, a Bali bamboo builder, treats its poles with a boron solution and quotes a structural life of at least 25 years from its engineers' calculations. That's the company's own figure, not an independent test.

A bamboo building still needs a PBG like any other under PP 16/2021, and your lender or next buyer will ask for it. On villas built to rent, we mostly see bamboo in pavilions and pergolas rather than in the main structure.

47–52 MPa

compressive strength, petung and tali

ArtComm, vol. 8, no. 2

25 years

minimum structural life, IBUKU's own engineering estimate

IBUKU FAQ

Source: Universitas Bali Internasional, ArtComm vol. 8 no. 2, bamboo architecture in Bali; IBUKU FAQ; Bukit Vista, villa construction costs 2026, August 11, 2026; PP 16/2021

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How do you protect a villa from termites and damp?

Specify protection while you build, when it costs least. BRIN tested 45 Indonesian timbers under SNI 7207:2014. Only 7 were highly resistant to subterranean termites and 6 were very durable against dry-wood termites. Resistance to one type didn't predict resistance to the other, so "termite-proof timber" isn't a specification.

Ask for four things: a soil termite treatment under the slab, treated timber, waterproofing beneath bathroom and pool-edge slabs, and a roof pitch that sheds water away from the walls. Check them at handover, while fixing a leak is still cheap. Denpasar's humidity averages 77–82% in every month, which is why our running costs guide gives damp its own section.

Source: BRIN, Jurnal Penelitian Hasil Hutan, resistance of 45 Indonesian wood species to termites under SNI 7207:2014; Rise Real Bali due diligence practice; climate normals via our running costs guide

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What should you ask a builder or developer?

Put materials in writing before the deposit, because a good developer will already have these answers on file.

- ✓ Structural drawings and the calculation behind the PBG
- ✓ Block type and wall thickness, not just the word "brick" on a spec sheet

- ✓ Species, grade and SVLK papers for every piece of timber
- ✓ Termite treatment record plus a written waterproofing warranty for bathrooms and the pool
- ✓ A bill of quantities for any bamboo
- ✓ Prices re-quoted within the past twelve months, not last year's estimate

Source: Rise Real Bali's due diligence work, 2023–2026

09 / 09

Look at what's built

Seeing a building beats reading the brochure. Browse completed villas and off-plan projects, then tell us which you like. We'll ask for the structural file and the material list before you commit, and send you both.

What this means for buyers

- 01 Concrete frame, blockwork walls and a metal or concrete roof describe most Bali villas. Wood and bamboo are mostly finish and style.
- 02 Ask for structural drawings and the calculation behind the PBG. The word "teak" or "brick" on a render proves nothing about strength.
- 03 In the one Bali wall comparison, batako was cheapest, brick 6% dearer and hebel 26% dearer. It's a ranking from one school, not a villa quote.
- 04 Bamboo has tested strength of 47–52 MPa, but no public price list exists. Ask for a bill of quantities.

FAQ

What are Bali villas made of?

Mostly reinforced concrete frames, with walls of brick, batako or hebel blocks and a metal or concrete roof. Teak, merbau and bamboo go into doors, ceilings and pavilions. Earthquake design follows SNI 1726:2019.

Is bamboo strong enough to build a villa in Bali?

Yes for low-rise building, provided it's graded, treated and joined with bolts rather than only lashings. Petung and tali test at 47–52 MPa in compression. A bamboo building still needs a PBG approval, like any other.

Should I choose teak or merbau for doors and ceilings?

Either works under cover. Merbau is denser and rated class 1 for decay above ground, while teak is lighter and more stable as it dries. Quality varies by stand and grade, so ask for the species, grade, moisture content and SVLK legality document.

Which wall material is cheapest in Bali?

In one 2026 Denpasar school project, batako cost Rp 402 million, red brick Rp 426 million and hebel Rp 508 million for the same walls. That's one building, so use it as a ranking, not a price for your villa.

How do you protect a Bali villa from termites?

Treat the soil under the slab, use treated timber, waterproof wet areas and shed water away from the walls. BRIN's test of 45 Indonesian timbers found few were highly resistant to both termite types. Don't rely on the species alone.

How we know this

Materials by building part describe practice in the villas we review. No register of materials in Bali buildings exists, and we say so. Prices come from named Indonesian sources with dates: cement from Medcom, March 2026, hebel from Mamikos, 2026, and wholesale construction prices from BPS, August 2026. Most come from Indonesia or Jakarta, not Bali, and delivery to the island or the Bukit usually adds to them. The wall comparison comes from one study of a Denpasar school, and the percentages are our arithmetic from its absolute costs. The roof ranking is from a 2023 student report that used 2021–2022 prices. Timber properties come from CIRAD, the Queensland government and TRAFFIC. We found no public per-cubic-meter prices for teak, merbau or bamboo structures, so we give none. IBUKU's 25-year figure is the company's own claim. This isn't engineering advice.

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Rise Real Bali is a real estate agency in Bali. We write from the deals we handle and from public data, and we name our sources.

By Dmitrii Rogov, Rise Real Bali.

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