

2. How do I WATERPROOF my HOME?



Are you worried about your house getting damaged by strong rains?
Does your house have water seepage in the walls and ceiling?

This toolkit shares easy, low-cost tips for waterproofing your home.

Why does your home get damaged during the rains?

If your house doesn't have proper plinths, good wall finishes, and a waterproof roof, it could be at risk of water seepage—which can seriously damage and weaken the structure over time.

Seepage causes mold growth, which increases chances of asthma and other respiratory illnesses.

Such repairs are very expensive. The good news? This handbook has simple tips to help you prevent seepage before it becomes a problem.



Tips to **WATERPROOF** your **HOUSE**



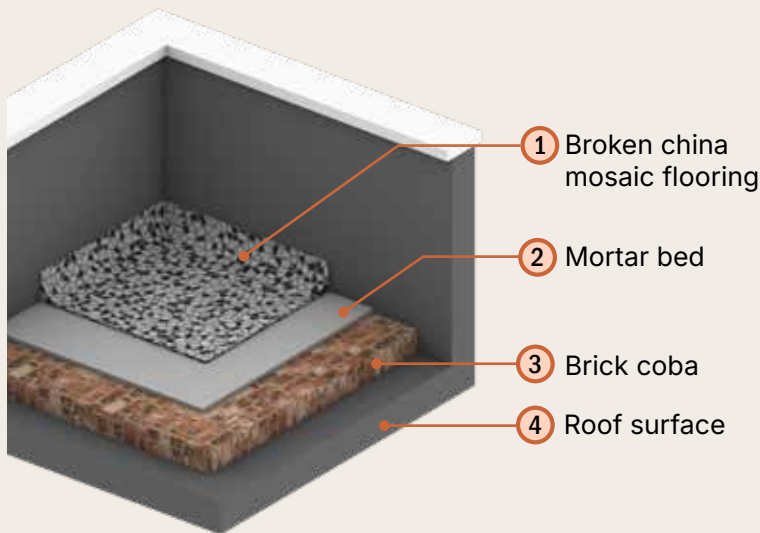
1. Provide a **Damp Proof Course** below the ground floor level
2. Give minimum **2' deep chajja** above all doors and windows
3. **Finish your exterior wall** with plaster, waterproofing compound, and exterior paint
4. Provide a slope on the roof slab, **leading rainwater to gutters**
5. If you live in a high rainfall area, **choose a sloping roof**

Are you building a house and want to make sure your roof stays waterproof?

A. BROKEN CHINA MOSAIC FLOORING

This method involves laying bricks over the roof slab and filling the gaps with a mix of cement and waterproofing compound. To finish it off, you can add a top layer of broken mosaic tiles set in cement mixed with waterproofing material for extra protection.

This method helps in both waterproofing and heat proofing your house.



Expert skills required



Provides insulation



Takes time to lay



Easy to repair



Laying the brick bat coba with cement filling mixed with waterproofing compound



Laying china mosaic on the brick bat coba

Points to note!

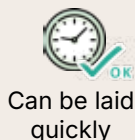
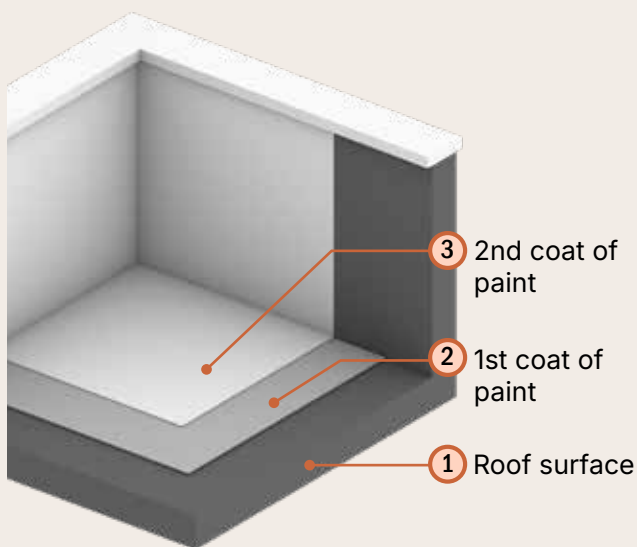
- ✓ Clean the roof surface well. Make sure that there is a slight slope on the roof slab, so that water does not collect in one area
- ✓ Lay one layer of bricks on the face or side, and fill all the gaps with cement mixed with waterproofing compound
- ✓ Wait till its dry, and then add a layer of mortar
- ✓ Lay the broken mosaic tiles, and fill gaps with white cement
- ✓ Avoid roof treatment during rainy season



Have an existing roof that you would like to waterproof?

B. EPOXY WATERPROOFING PAINT

This method involves adding multiple coats of epoxy waterproofing paint on the roof slab. It is inexpensive, available at your local hardware store, and can be easily applied on an existing roof.



These methods are very easy to follow, and affordable! Ask your local contractor about them.

Just make sure your roof slab is built with a slight slope so that rainwater drains off easily and doesn't collect on the surface!



How do you choose a roof design and ensure good drainage?

C.

ROOF DESIGN AND DRAINAGE

For Sloping Roofs

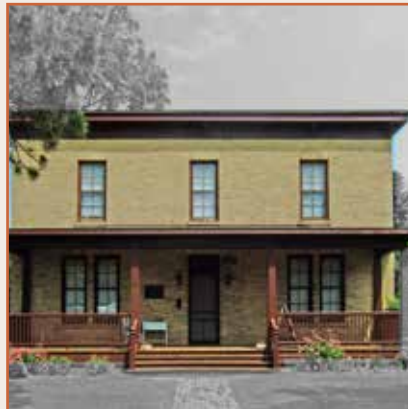


Good performance in hot and rainy locations

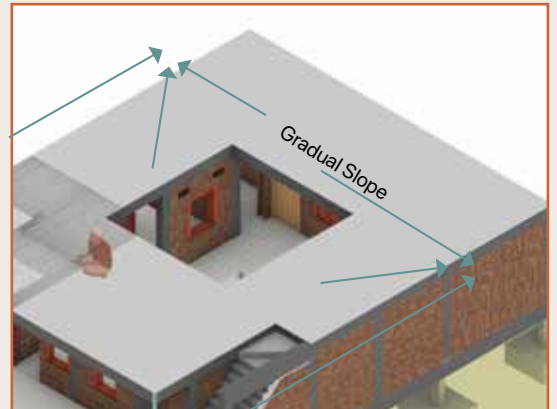


Install gutters at the edge of the roof

For Flat Roofs



Poor performance in hot and rainy locations



Make sure that the roof slab slopes towards corners where gutters will be installed

Points to note for good drainage!

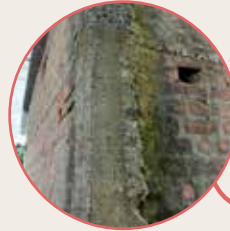
- ✓ Design and provide gutters and rainwater pipes based on rainfall in your area. More rainfall, bigger the pipes.
- ✓ Provide a minimum slope of 30 degrees
- ✓ To protect walls from rainwater, extend the roof 2 ft from the wall
- ✓ Add a chajja on all openings.
- ✓ On a sloping roof, ensure adequate overlapping of roof sheets or tiles to avoid leakage



It is important to not only waterproof your roof, but your walls as well!

D. WALL FINISHES

Exterior building finishes are vital for protection of your house. In area with heavy monsoon, avoid keeping exposed brick walls without plaster or paint to prevent dampness and water seepage.



Untreated exteriors reduce the life & health of the interiors

Plaster Work



1. In high rainfall regions, and areas prone to water-logging, add waterproofing chemicals to the plaster mix.

Painting Work



1. Mix a waterproofing compound with the exterior paint
2. Do painting work only after monsoons.
3. All of these paints require 2-3 coats.

Ensure that damp proofing and waterproofing is done in the dry season

The waterproofing method should be chosen according to the regional temperature and rainfall conditions



Now that you have constructed your house, it is important to maintain it regularly!

E. HOUSE MAINTENANCE



Routine maintenance is the cheapest way to avoid issues from occurring. You can fix small problems before they become urgent, life-threatening, or irreparable issues.

1. Never schedule painting during the monsoons as rain or moisture. Best time for painting is in dry summer time.
2. Ensure there is no collection of rainwater on your flat roof. Re-do the coat of terrace water proofing as needed
3. Check the exterior drainage around the house. Rain water should flow away from the house and not form puddles.



Continuous exposure to water seepage and structural stresses in the interior of the house can also deteriorate its strength & quality over time. To avoid this, keep in mind the following points:

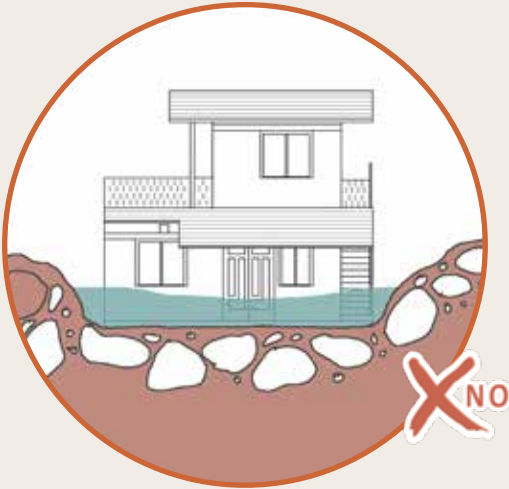
Points to note!

- ✓ *Make sure there is no seepage near plumbing or electrical connection.*
- ✓ *Regularly check for open or loose wires, broken sockets, switches, or any other electrical problems and get them repaired immediately by an electrician.*
- ✓ *Check the fixtures and pipes for any signs of leaks, discoloration or cracking or crimping of plastic, deposits or rust-like buildup that could indicate wear or corrosion. If you spot any of these issues, call a plumber to fix it.*
- ✓ *Ensure regular cleaning and maintenance of septic tank and sanitation pits.*

Choose your home site wisely—selecting the right location can help you avoid waterlogging

F.

SITE SELECTION



1. Never build in waterlogged areas, or flood-prone areas near water bodies.
2. If unavoidable, raise the house on stilts.



1. Avoid sites with very high ground water table.
2. If unavoidable, dewatering the site.



1. Avoid soils that absorb a lot of water, having high clay content., eg. Black Cotton soil.



1. DPC (Damp Proof Course) is provided above the plinth, to prevent water seepage from the ground.
2. Add waterproofing chemical to plinth beam while casting for better safety of structure.



Ensure that plinth is high enough to prevent storm water from seeping in.







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2. How do I waterproof my home?
3. How do I select the right materials?
4. How do I select the right construction team and supervise the work?
5. How to develop the site and construct a strong foundation?
6. How to build strong walls and design windows?
7. How to build a strong roof?
8. How to choose the structural system for your home?
9. How to build a well-serviced home?
10. What are the tips for good RCC construction?
11. How do I maintain my home after construction?
12. How do I design my home?

Disclaimer:

The toolkits offer general guidance based on hot and dry climate conditions in India, and is intended for informational purposes only. It does not replace professional advice. For safe and effective construction, please consult a qualified architect or engineer in your area. We are not liable for any outcomes from the use of this toolkit. If you want us to customise this toolkit for your geographic context, or need more information, feel free to contact us.



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