



Physical Properties and what to consider

Part 2: Wind and Cyclone Protection

Your family and your home are your biggest assets and by investing in roof tiles, you can protect them from the dangers of powerful storm winds.

In this guide we will be covering the physical properties of roof tiles in relation to their innate wind resistances and how they can be of invaluable assistance to your family and property.



Why are Roof Tiles Wind resistant?

Roof tiles are able to resist high-pressure winds due to their heavy weights and high wind permeability. This allows them to better withstand uplift winds which can loosen or even rip roofing materials right out of the frame.



FACT: No roof is completely immune to the weathering caused by wind.

TRUE: Although roof tiles boast incredibly powerful wind resistance capabilities. There is no roofing material in existence that is perfectly immune to the elements.

DID YOU KNOW?

- According to research conducted by the Tile Roofing Institute, properly installed roof tiles can resist winds up to 125 mph. At its peak, the 2017 storm Cyclone Debbie attained a wind speed of 120 mph.
- The necessity of roof tiles being heavy to resist wind does not add undue stress to your roof frame.
- Southeast QLD and the central NSW coast experience the most damaging individual storms anywhere in Australia.



Why a Wind Resistant Roof Affects Everyone

Over a period of years, wind is capable of making an impact on your roof from minor weathering to utter ruin. You could end up being forced to conduct an early roof replacement or restoration. Investigations revealed that the most common causes for this outcome was due to poor installation, to ensure high quality installation, licensed contractors should be retained. This will help ensure proper permits are filed and building code requirements are met.



Roofs and Cyclone Codes

After the devastation caused by Cyclone Tracy in the 1970s, the Government implemented a strategy to improve the survivability of homes for future wind related crises.

As part of this development, the government introduced wind rating codes. These codes determine the measures builders need to take to ensure a particular building is up to the task of withstanding the toughest winds the particular region has to offer.

More specifically, Cyclone code regulations influence cladding types and the minimum strength a roof must possess.

In Australia's tropical regions, regular maintenance is a must. This is because the winds in these regions are strong on a regular basis, roofs in such areas will weather faster than roofs in other locations. Ensuring your roof is up to the task of withstanding a cyclone is something that you need to be prepared for.

For cyclone prone regions, it is important that homeowners consider building cyclone safe rooms on their estates. These chambers are typically small and reinforced with concrete walls and ceilings for maximum protection during an emergency.



Roof Tiles v Metal Roofs

Though roof tiles and metal roofs can prove to both be effective wind performers, roof tiles are the more efficient choice when standing up to cyclone winds. This is due to the superior weights of the product which makes them highly resistant to uplift winds. Furthermore, they are effective sound insulators and can reduce the volume of penetrated external noise by over half that of metal.



How to choose the right roofing contractor for you

A roof is a good investment just like a good contractor. If you are juggling over multiple possibilities consider the following list.

- Look for groups that offer free quotes with zero obligations.
- Determine if the contractor is legitimate, a high quality website is typically a marker of validity along with a business address, email and contact number. Also check if the contractor has a workers compensation policy, a requirement for most business in NSW.
- Ask your contractor for a list of references, some groups proudly display past clients on their sites.
- Do not hire based on cost-effectiveness alone.



FAST FACT

- A roof with high wind resistance is unlikely to ever leak during its lifespan. Loose roof tiles cannot always be identified from sight alone.

INSURANCE CONSIDERATIONS

Be sure to check that your home insurance covers cyclones as well as the many complications it can cause such as flooding and storm surges.

Don't wait until the last minute to modify your cover. Most providers possess a grace period after application which means you won't be covered for a cyclone if you apply for cover a day before it actually hits.

By demonstrating to your provider that you took adequate measures to guard your home from cyclonic conditions, such as installing roof tiles. You will be better positioned to be approved for a claim if your property is damaged by a storm.

WATCH OUT!

- 16% of the Worlds Cyclones form in the Australia region.
- The northwest of Western Australia between Broome and Exmouth is the most cyclone prone part of Australia's coastline.



Do you live in Tropical Australia?

People who live in Australia's tropical regions are at greater risk of facing a cyclone than those who live in other environments.

Tropical Australia encapsulates a large portion of Northern Queensland and ranges generally from Mackay all the way up to the tip of the Cape York Peninsula. 54% of Queensland is considered tropical.

CYCLONE SAFETY CHECKLIST

There are many easy steps you can take to improve the survivability of your home during a cyclone.

1. Invest in roof tiles as their superior weights make it difficult for even the strongest winds to find purchase against them.
2. Make sure your insurance covers you for cyclones.
3. Ensure your doors and windows are secured with bolts. Keep them closed for the duration of the storm.
4. Confirm that guttering is securely fastened.
5. Trees must be trimmed or kept at a safe distance from the home.
6. Surrounding fences should be checked to ensure pickets are secured.
7. Before a cyclone hits, turn off the electrics and gas. Disconnect electrical appliances.
8. Fill bucket and bath with clean water in case of water outage.

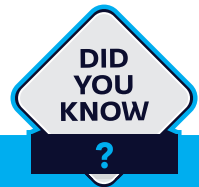
9. Keep a wireless radio and ensure it has enough power to last through the storm.
10. Outline a survival plan with your family and be sure to review it once a year.
11. Ask yourself if evacuation is necessary, the safety of you and your family must come ahead of your property. If you believe staying is too great a risk, then you must evacuate regardless of all preparations you may have implemented.



What to expect during a cyclone

You can never be too prepared and it hurts to panic and lose control of the situation. By having a thorough understanding of everything that can happen during a cyclone, you stand to better keep both your family and property safe.

- **Power outages:** Strong winds can cause complications with local power supplies, electric companies may also shut off the power for public safety.
- **Flooding:** Cyclones are typically preceded by huge amounts of rainfall and it is not unheard of for entire districts to be flooded. If your home is situated in a natural basin you need to take extra steps to address this.
- **High winds:** It goes without saying, but wind speeds during cyclone can reach well over 200kms per hour. It simply is not safe to be outside during this time. Loose debris carried on the wind can cause severe damage.
- **Storm surge:** A rise in the local sea level which can also cause flooding in seaside locations.



Each year, on average, severe storms are responsible for more damage (as measured by insurance costs) than tropical cyclones, earthquakes, floods, or bushfires.

One of the common reasons roofs may fail in harsh winds is due to improper installation. As a result high grade contractors should be retained.



Common Features of Wind Resistant Homes

While no builder can guarantee a 100% cyclone-proof home, effective design measures can be taken to protect both your family and property without compromising on style.

- **Round Building and roof shapes:** Circular homes inhibit a wind's ability to apply pressure to the structure
- **Roof Tiles:** Due to their heavy weights, roof tiles are capable of resisting winds in even cyclonic conditions.
- **Roof pitches between 30 – 45 degrees:** This protects your roof from being lifted from the frame.



Quick Terminology Guide

ADVISORY: *Official information released by tropical cyclone warning centers that describes details of cyclone locations, intensity, movement as well as conveying helpful precautions.*

BEST TRACK: *A representation of a cyclone's location and intensity over its lifetime. It contains important data in relation to latitude, longitude, surface winds and sea level pressures.*

CENTER: *The vertical axis of a tropical cyclone.*

CYCLONE: *An atmospheric closed circulation.*

HURRICANE: *Another term for Cyclone, same for Typhoon. The name varies depending on location.*

POST STORM REPORT: *A report created after a cyclone has dissipated that publishes all relevant data.*

STORM SURGE: *An abnormal rise in sea level that accompanies a hurricane.*

VORTEX FIX: *The center point of a tropical cyclone, also known as the center.*

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