

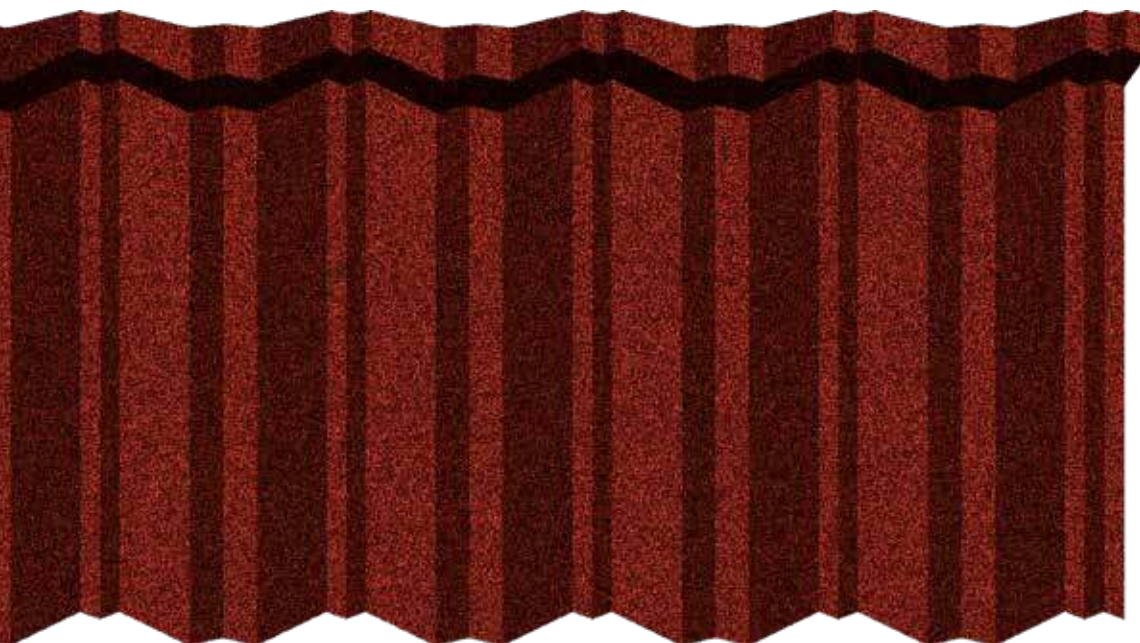
Buyers Guide

TO STONE COATED METAL
ROOF TILES



Buyers Guide

To Stone Coated Metal Roof Tiles



WHY CHOOSE **METAL** **ROOF** **TILES?**

This guide is recommended reading for anyone buying a roof for a new home, or replacing their roof on an existing building. Spending 20 minutes now, can potentially save you a lot of money and future heartache.

After reading this guide, you will be in a position to make an informed decision about your purchase and will be able to question the suppliers in detail about the quality and integrity of their products.

“With so many suppliers, all telling me different things, I don’t know who to trust and how to make an informed decision”

The critical differences affecting the performance and durability of stone coated metal roof tiles (MRT) comes from to the quality of the raw materials used and the level of technology employed in their manufacture.

So, how can the average person know what is good and what is bad, when most products look more or less the same when they’re new?



Reasons to be careful

Home Owner's Stories



Steel Failure

“I was told my product had a 50 year warranty, but when rust appeared after 4 years I went back to the people that sold it to me and they said they no longer used that manufacturer and they could not help me. The next year I had to replace my whole roof.”

Chip Loss & Colour Change

“I was told that all stone coated roofs were the same and the only difference was price, but within 6 months a lot of the stones had fallen off my roof. After 2 years, the colour was unrecognisable. When I tried to complain to the supplier, they were no longer in business.”



Rust & An Untrustworthy Supplier

“When my roof was installed, everything was fine and I was delighted. It was only when the rains started that we experienced constant leaks. I called back the installer because I thought it was an installation issue, but he showed me multiple cracks in the steel tiles. I had to change the entire roof!”

Cheated by our Installer

“When we built our house, we made sure that we chose the best roof & received a quote directly from the supplier. We gave this to the installer & paid him the money to buy the materials & to install the roof. In less than a year the colour of the roof started to change. When I went back to the supplier to complain they told me that they had not supplied this material. It turns out that the installer had taken our money & had gone to another supplier to buy a cheaper product.”





Buyer Beware



✗ FAKE



✓ GENUINE

The roof is arguably the most important part of every building. It represents a significant proportion of the building cost and is a critical part of the overall design, aesthetic and beauty of the building.

As with everything we buy, **when two products look the same, but one carries a significantly higher price, there is usually a good reason** - one which we can't always see from surface appearance!



Calculating Costs

Before buying a roof there's one thing to be aware of when comparing prices. In most countries it's usual to cost a roof using the **cost per square metre**. The quotation you get from the supplier should state this. However, some roof tile suppliers may try to appear cheaper by giving you a **cost per tile**.

When comparing two or more suppliers, make sure you're comparing the same cost - either sqm or tile cost.

International Quality Assurance

There is an unfortunate truth that not all countries have the capability to enforce equal standards, either manufacturing standards or building standards. If you want to be confident about a product, then the country of origin can give an indication of standards in manufacturing control.

ISO standards 9001 and **14001** for example mean that the manufacturer has to have designed and implemented process and controls which provide quality assurance (9001) and Environmental Management Systems (14001) and to have been independently audited, annually against stringent criteria for achieving this accreditation. All products supplied from an accredited organisation must meet the quality standards. This accreditation comes at a cost but it is an **assurance to the buyer** about the quality and reliability of the product and the manufacturer themselves. Warranties provided by accredited companies also carry the backing of the ISO standard.

Where does the manufacturer sell their products?

For building materials quality standards the following countries are generally accepted to have the best enforced standards:

- Japan
- United Kingdom (BBA)
- European Union
- USA/Canada
- New Zealand

If your supplier claims international status, but is not able to sell their products in these markets, there is probably a very good reason why. Surely if a product is 20% or 30% cheaper than another, buyers in the UK or USA would equally want to benefit from this price as buyers elsewhere, so why does this manufacturer not sell in those markets? Surely the opportunity would be very lucrative? You will probably find that because standards are both high and enforced in these countries, these products are unable to be sold.

Other Certification:

There are various international bodies that provide performance test certification against agreed standards. For building materials and especially roofing, these standards cover things such as fire ratings, rain noise, rain penetration, collection of drinking water, wind uplift and security, thermal resistance, corrosion resistance, and impact resistance. A quality manufacturer should be able to provide information about independent performance testing in these areas.

What are MRT tested against?

Quality Metal Roof Tiles are tested to perform against conditions and circumstances from everyday occurrences to extremes. They should be tested against, and have certification for things such as:

- Fire resistance
- Hurricane Conditions (High Winds)
- Monsoon Conditions (Wind & Rain)
- Corrosion
- Hail
- Security

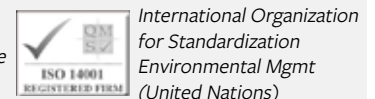
Your supplier should be able to provide you with their tile's performance against each of these scenarios.



Certification

Ask your roof supplier to provide details of their product's international quality certification and / or test results.

Quality MRT manufacturers should be able to provide you with evidence of the following standards:



Warning Signs

Things to pay attention to when buying your roof



Who is standing behind your supplier?



“Everybody offers a 50 year warranty”



In which country is the product really made?

FONY.

How to spot a fake

Are they a known company? A new roof can cost several thousand dollars, so why would you risk your money if you don't know who the company is that's standing behind the product?

Are they credible internationally? Research the manufacturer of the brands available to you. Ask which country they are from and which countries they sell to?

How credible is the organisation? Look beyond the fancy web site and try to find out more about the manufacturing company.

Can they keep their promise? If a warranty or guarantee is offered with the product, have you seen this, or have you just been told about it? Ask for more details. If you don't know who is standing behind the promise, how would you solve any future problems?

A 50 year warranty is commonly offered by both major & minor suppliers. But while major suppliers generally offer limited comprehensive warranties, an unknown brand may offer a 50 year warranty without specific terms. You should question how exactly their warranty process works. ie: If there is a problem, how can you be sure you'll get your money back, or who will pay for the installation if the roof needs replacing?

If the company has only been making products for a few years, ask how they can offer a 50 year warranty when the product has not been around for anything close to this time? **Products that have a proven track record can be better trusted;** so look out for manufacturers that have been in business for over 50 years

There is a regulation in most markets to show the country of manufacture on the actual product, together with the manufacturers name. Unfortunately regulations are not always enforced, so sometimes false names and false countries of origin appear on the products. Be sure not only to check what is printed on the tiles, but also ask to be shown some evidence of source, maybe certificates of origin, or other shipping documentation which show the original country of origin.

You can also check the credentials of the company by internet research, or by contacting the supposed manufacturer directly. If your supplier refuses to share these details, it would be a good time to walk away.



Credible manufacturers will always have their name & a production code on the back of their tiles. You should be able to contact the manufacturer to request a verification of the product that is being offered to you. Some international manufacturers now offer an app which you can download to your smart phone and check whether or not a product is genuine, there and then.



If a brand is well known, there are unscrupulous suppliers that will copy the brand name on their product. It is therefore worth checking. Perhaps send an email to the manufacturer and ask them if the person selling to you is an authorised distributor.

How MRT are Made

Key points you need to know

“Steel is steel – right?” Wrong! Making steel is a highly complex process and the final steel supplied to MRT manufacturers will vary enormously in terms of strength, brittleness, flexibility and adhesion quality. Because the core steel base of every MRT is covered, it is impossible for the buyer to know anything about the steel quality of their tiles, but here we’ll discover the things you need to know, and the things to ask your roof supplier about.



Which Steel?



Big international roofing companies will always buy their steel from quality sources because failure of the steel will have a big impact on their reputation. Steel from smaller steel mills is cheaper, sometimes half the price, but this steel comes without guarantee. Steel which would be rejected by the big companies is used by other manufacturers who pass all of the risk on to the buyer.

The coating on the steel is also critical. It directly affects the durability and performance of the roof tile. If the steel is not first class quality there will always be problems with these coatings. A corrosion inhibitor coating, such as **Alu-Zinc**, is critical for the long term performance of the tiles. For example, the best MRT are always coated with a minimum of 150g/sqm of Alu-Zinc (known as AZ150). If, however, the coating is reduced by 1/3 (to 100 g/sqm), the lifespan of the product is reduced by 50%. Sometimes tiles use as little as AZ40, providing only very limited resistance to corrosion. The buyer won't know this for 4 or 5 years, but their roof may begin accelerated corrosion (rusting), while neighbours in the same build environment, can enjoy their roof for 50 years.

Stone Coating



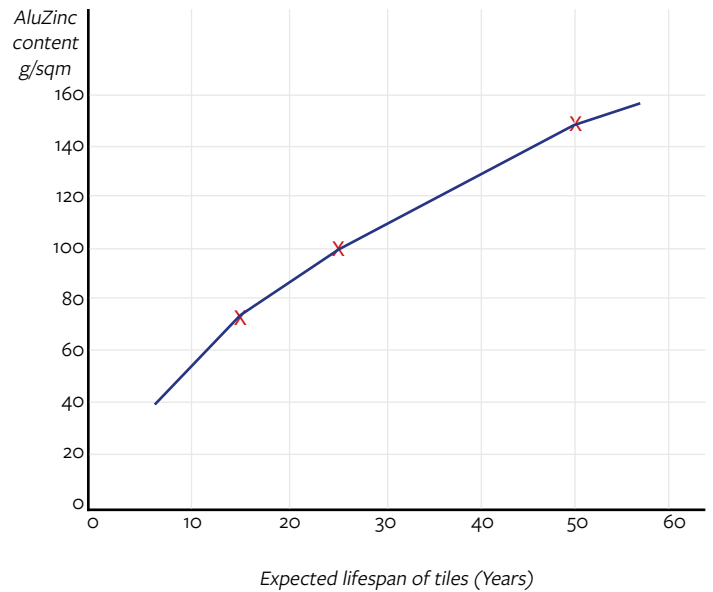
Natural Stone is used for all quality MRT. However, different types of rock have different properties. They should not only be hard and strong, but also UV stable to ensure colours do not change under Ultra-violet exposure. It is also important that the stone has a low iron-content to prevent patches of rust appearing on the tiles and discolouring the roof.

Coloured or Ceramic? Where certain colours, such as blue, do not occur naturally, the stone chip can be coated using high quality ceramic technology. There are cheaper ways to colour the chip, but these are highly prone to colour change under UV exposure. The biggest single complaint from buyers of cheaper roof tiles is that of colour fade.





Alu-Zinc / tile lifespan ratio:



Bonding Technology



The first stone coated tiles made in New Zealand over 60 years ago used bitumen to bond the stone coatings to the base metal. After long UV exposure, the bitumen began to crack and 'chip-loss' started to occur. Today, the world's biggest companies have developed their own acrylic based coating technology. The Intellectual Property of their acrylic coatings is a closely guarded secret because it is one of the key differences between products. It's sometimes said that to make a tile look good when it's new is easy, the clever technology keeps the tiles looking good for 30, 40, or 50+ years.

There is other technology in the coatings used by the big names in MRT. Not only does this technology keep the chip in place for longer, it can also assist in:

- performance against discoloration from organic growth
- suitability for collection of rainwater
- protects the stone chips during transportation, cutting & installation
- protects the coatings during 'roof-traffic' (people walking on the roof during installation or maintenance).

Production Technology



To make a lot of MRT to a consistently high and reliable quality, the manufacturing technology has to be first class. The biggest names in MRT invest millions of USD in their tile press, coating lines and ovens. When a customer looks at a new tile and compares it with a tile from a small supplier, it is difficult to see the difference. This is because the difference in the technology is inside the product and can't be seen.

Only after the roof is installed do problems start to occur. The investment in manufacturing technology is what stands behind the manufacturer's warranty. The brand name from these manufacturers provides the buyer with confidence and trust in the future performance of their products.

Refer to quality standards section on Page 5 to learn more about quality international approvals.

ABOUT MRT



History

Stone coated metal roof tiles first appeared in New Zealand in 1954. Entrepreneur, Lou Fisher developed a pressed metal tile and used bitumen as a bonding agent to hold stone aggregate which was used to give the tiles their colour.

Over the years technology has improved and today, New Zealand is still the world's biggest producer of stone-coated roofing tiles

Features

The main feature of MRT is that of design. Pressed steel sections form different profiles which provide the architect or home builder with a choice of architectural features. These can be similar to clay tiles, wood shake, natural slate and American Shingles. With a wide variety of colour choices available in each profile, MRT provides multiple choices in design to fit the majority of architectural needs.

Benefits

There are multiple performance benefits when using MRT:

- Light weight - They do not add heavy load to a building, usually being 6-7 times lighter than a clay, slate or concrete roof.
- Weather secure - With their interlocking installation feature, MRT are used extensively in areas subject to heavy rains and high winds, especially in hurricane prone regions.
- Fire Proof - One benefit of the materials used in the manufacture of quality MRT is that they don't burn. In the event of fire, the roof will not contribute to fire and in the event of an external fire, the fire cannot penetrate the building through the roof. Quality international manufacturers will carry fire test certificates to show that the coatings used in their manufacture are considered non-flammable and do not contribute in the event of a fire.
- Long lasting - If the tiles are made from quality materials (see section "How MRT are made"), they can last 50 years or more without the need for replacement. This can add considerably to the value of a building where future re-sale value is considered important to the buyer.

New Roof / Re-Roof

On a new building, MRT can be installed over a steel or timber frame. They can be used with additional insulation to reduce heat transfer and they have much lower levels of rain noise when compared to other metal roofing. They are easy to transport and with some training, easy to install. A trained installer can roof a building 3-4 times faster than installing clay tiles or bitumen shingles.

MRT are also often used to re-roof older buildings, because they are light weight and can usually be installed over an existing roof.

Sometimes they are installed over a flat roof, by building a new roof frame, thereby creating a pitched roof over a former flat roof design.



Things to consider when **choosing the right roof for you**

Generally companies will want to sell you what they have in stock and this may not necessarily be the right choice for you. It is worthwhile spending some time looking at the different options available and having a good idea of what you want before talking to different suppliers

Profile



There is a reasonably similar range of profiles from different suppliers who may use different names to describe them



Heritage
Bond
Pan



Senator
Vixon
Shingle



Roman
Milano
Italian



Shake
Makuti
Woodshake



Classic
Edge

Colour



There is a huge range of colours ranging from 100% natural stone, to ceramically coated stones. It is important to use a supplier whose product has a long track record and whose colour technology is proven in all environments, because the single biggest issue with products that fail are with colour change.

Building Style



Make sure you choose a roof profile and colour which matches your building's colour and design. What may look nice in a showroom or in a picture may not in reality match your building style. Look at pictures of similar buildings and see which roof best matches 'your look'.

Surrounding Environment



Some profiles and colours look better than others in different physical environments. For example, in a natural green environment, darker roofs in brown, dark red and black tend to be better suited than blues and brighter colours.

Five Steps to a **flawless** MRT roof purchase

1

Research the MRT manufacturers you are considering

2

Check the manufacturing process, in particular the alu-zinc coating

3

Choose your profile & colour. Ask to see the quality certification

4

Ensure your installer buys the brand of tiles you want.

5

Complete the warranty registration & enjoy your new home

If something seems too good to be true,
it usually is