

High corrosion resistance • High scratch resistance • Attractive finish

Stramit MagnaFlow[®]



Pre-painted steel with Magnesium added technology for superior corrosion resistance.



MagnaFlow®

MagnaFlow® sheeting is a highly durable prepainted sheet steel system suitable for use in corrosive environments for roofing, walling and rainwater products. The protective metallic coating on the base steel is a new technology in accordance with AS1397 -2011. This coating provides the added durability of the MagnaFlow® product. MagnaFlow® sheeting comes with a choice of paint systems to suit individual applications.

Please enquire at your local Stramit office for the range of paint colour availability.

Substrate

The coating on the steel substrate complies with the coating classes as specified in AS 1397 – 2011: Continuous Hot Dipped Metallic Coated Steel Sheet and Strip – Coatings of Zinc, and Zinc Alloyed with Aluminium and Magnesium.

The MagnaFlow® coating comprises zinc, aluminium and magnesium and delivers more durable site performance than standard zinc or Zinc/aluminium systems.

Minimum coating mass is 240gsm.

Paint Systems

MagnaFlow®

The MagnaFlow® painting systems are applied by Pacific Coil Coaters (PCC) in New Zealand, using the most up to date painting technology. PCC, like Stramit, is part of the Fletcher Building Group.

Primer

The primer is a flexible corrosion resistant chromated primer, with a nominal film thickness of $7\mu \pm 1\mu$ on the top side, and $5\mu \pm 1\mu$ on the reverse.

Finish Coat

The finish coat can be a flexible acrylic, polyester or modified polyester coating, with a nominal film thickness of $18\mu \pm 2\mu$.

MagnaFlow® X

For applications where there is a high risk of deterioration from corrosive elements, such as severe marine or industrial sites, then the MagnaFlow® X paint system could be suitable. The MagnaFlow® X paint system uses the same substrate, but comes with a more durable surface finish.

The finish coat is a Polyvinylidene Fluoride (PVDF) paint system of nominal film thickness $20\mu \pm 2\mu$, containing at least 70% resin in the dry paint film.

Other

The backing coat is a Shadow Grey (standard colour) wash coat $5\mu \pm 1\mu$.



Gloss levels are $25\% \pm 5\%$ measured in accordance with ASTM D523 – 14 (60 degrees)

Products can be supplied with an optional strippable film at extra cost. This material has a relatively short life span when exposed to sunlight and weather. It should be removed either just before or immediately after installation.

Recommended end uses

MagnaFlow® paint systems have a very good colour and gloss retention and are suitable for roofing, cladding and rainwater goods. It is ideal for animal shelters, flashings, interior uses, and exterior environments where corrosion levels are moderate. It is also suitable for fencing applications.

Animal and farm environments

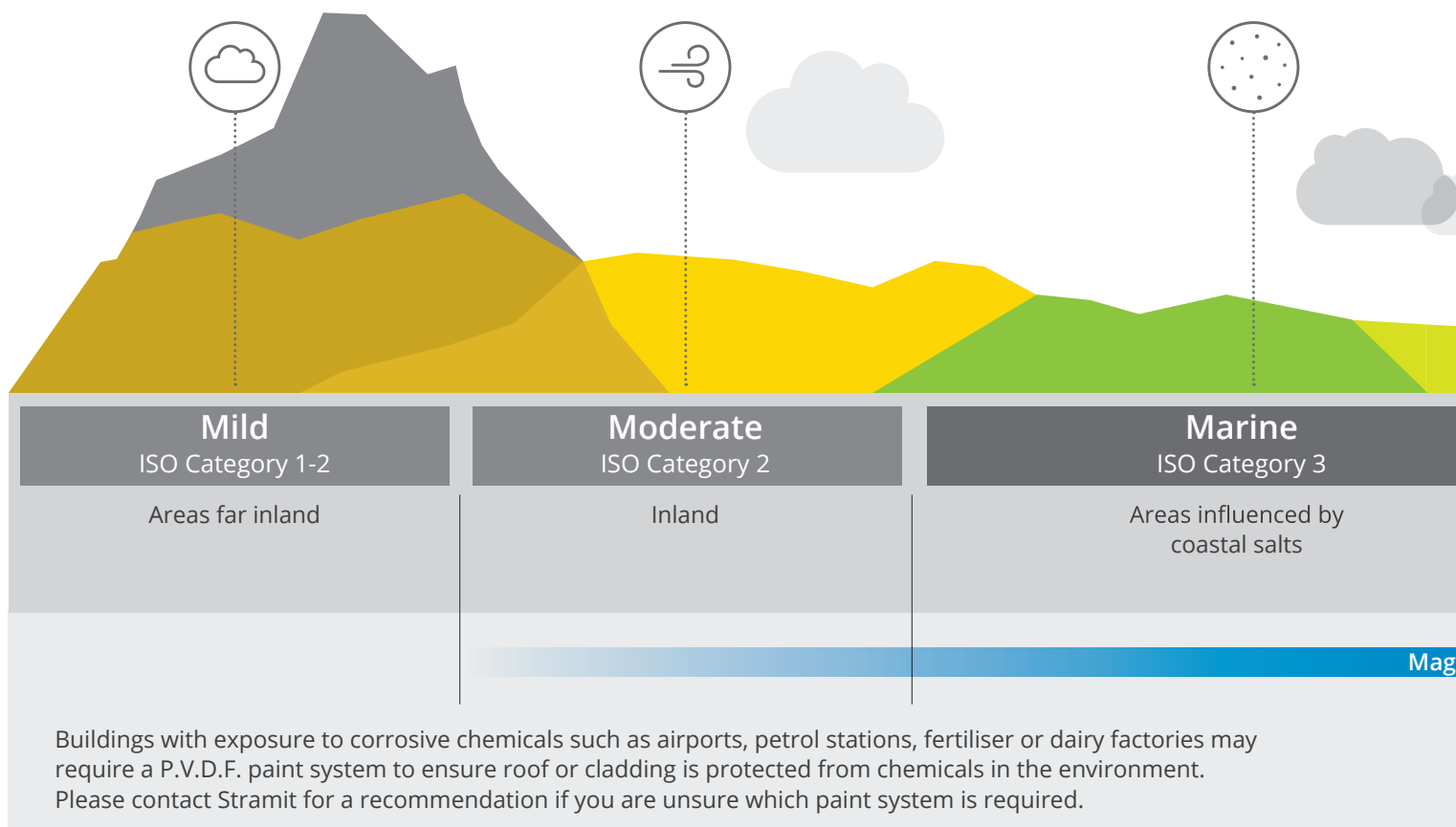
Excellent resistance to ammonia and humidity make MagnaFlow® coated steel products suitable for animal barns, composting sheds and other farm buildings with harsh, damp environments and corrosive conditions caused by animal excreta.

Fastenings

Class 5 coated screws will give the best service life with MagnaFlow® products.

Do not use stainless steel or monel fasteners on MagnaFlow® products.

For further details refer to the SA HB 39:2015 Installation code for metal roof and wall cladding or consult your fastening supplier.



MagnaFlow® performance testing



Scratch resistance

Good scratch resistance. Testing includes needle scratch test – no marking of paint surface when a needle with a 2kg weight attached is drawn across. ASTM D5178-13.



Impact resistance

AS/NZS2728:2013 Table 2.2 and Appendix E. No loss of paint adhesion after a test piece is struck on the reverse side with a specified force, in line with the test methodology described in Appendix E.



Bend test

AS/NZS2728:2013 section 2.6.1 and Appendix F – No loss of paint adhesion when bent around a diameter equal to five times the thickness of the sheet.



Heat resistance

Suitable for continuous service up to 100°C. Continuous service at higher temperatures may cause some colour change and damage to the paint film.

Tested under New Zealand's most demanding environmental conditions and ready for the harsh Australian landscape.

Results from lab tests are backed up with ongoing testing through out New Zealand in demanding industrial & marine environments.



Salt spray

Meets the requirements of AS/NZS2728:2013 Sections 2.8 and 2.10



Humidity resistance

Meets the requirements of AS/NZS2728:2013 Sections 2.8 and 2.9



QUV resistance (durability of coating system)

Meets the requirements of AS/NZS2728:2013 Section 2.8 and Table 2.4.

Note: Tests are conducted on a flat panel.



Severe marine ISO Category 4

BEGINS between 100-400 metres from the coast. May extend inland depending on local conditions

Very severe ISO Category 5

Close to breaking surf (typically 50-500m)
Close to corrosive industrial emissions (typically 0-100m)

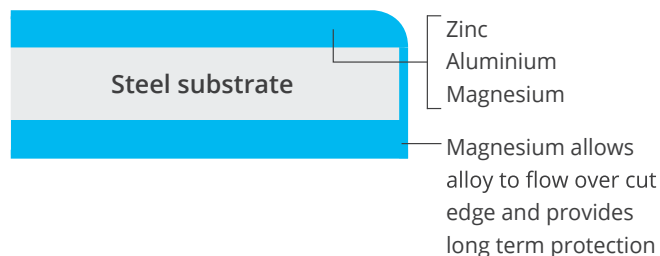
MagnaFlow®

These are general guidelines only. Building location, design & aspect need to be taken into account.
*To ensure warranty will be given, check with Stramit before using in these areas.

The magic of magnesium

All steel roofs are susceptible to the elements along cut edges however the addition of magnesium to the standard zinc/aluminium alloy in MagnaFlow® products provides superior corrosion resistance in this area. As time goes on it allows the protective metal coating to microscopically flow over the cut edge. At this point a sacrificial anticorrosive reaction takes place and a robust seal is created.

Anticorrosive reaction of MagnaFlow® products



Warranty terms

Depending on the environment, Stramit offers warranties of differing time periods on MagnaFlow® products for residential buildings.

Application		Environment (ISO CAT)		
		1-3	4	5
Roofing	Paint	20 yrs	20 yrs	15 yrs*
	Perforation	30 yrs	25 yrs	15 yrs*
Wall cladding	Paint	15 yrs	15 yrs	15 yrs*
	Perforation	25 yrs	20 yrs	15 yrs*
Guttering & Downpipes	Paint	20 yrs	12 yrs	10 yrs*
	Perforation	20 yrs	12 yrs	10 yrs*
Fascia	Paint	20 yrs	15 yrs	10 yrs*
	Perforation	20 yrs	15 yrs	15 yrs*

* A warranty on MagnaFlow® product in ISO 5 is subject to prior approval by Stramit

Refer to specific warranty information for full terms and conditions, including exclusions and minimum maintenance requirements. Buildings close to industrial areas which are be exposed to corrosive chemicals may require MagnaFlow® X paint system (for added protection via PVDF paint). Visit auswarranties.colorcote.co.nz and complete the warranty enquiry form.

Site practice

If nestable profiles become wet while closely stacked, formation of wet storage stain or 'white rust' is possible.

To minimise the possibility of inadvertent damage:

- Inspect deliveries on arrival. If moisture is present, individual sheets should be dried immediately with a clean rag and then stacked and filleted to allow air to circulate and complete the drying process.
- Well ventilated storage is essential. Always store metal products under cover in clean, well-ventilated buildings
- Cross stack or fillet sheets where outside storage is unavoidable and make provision for a fall to allow water to run off. Cover the sheets.

Installation

Refer to the SA HB 39:2015 Installation code for metal roof and wall cladding for correct installation guidelines, particularly in regard to underlays/building papers, penetrations, flashings, fasteners, pitch etc.

Dissimilar metals

When dissimilar metals come into contact with each other, the electric potential difference between the metals establishes a corrosion cell, and accelerated corrosion can occur.

To avoid this problem, the following precautions should be observed:

- Avoid discharges of water from brass or copper pipes on to MagnaFlow® products.
- Do not use non-galvanised steel, copper, brass, lead, stainless steel or monel metal in direct contact with MagnaFlow® products.
- Do not use lead flashings in contact with MagnaFlow® products.

Sealing and jointing

Where sealed joints are required, use only neutral cure silicon rubber sealant together with mechanical fasteners such as aluminium rivets. Do not weld or solder.

Unsuitable applications

MagnaFlow® and MagnaFlow® X products are not suitable for use in the following situations:

- For water tanks or areas where a constantly wet environment is maintained.
- In direct contact with concrete or where lime deposits are evident.
- In contact with soil (allow a 75mm run off below cladding sheets to ground level).

Touch-up paint

MagnaFlow® is a baked on paint system which has different weathering characteristics to standard air drying paints.

Do not use touch-up paint on MagnaFlow® products.

Clean up

Installation procedures involving self-drilling screws, drills and hacksaws etc will leave deposits of swarf and metal particles. These particles including blind rivet shanks, nails and screws should be swept and washed from the roof regularly. Refer to the SA HB 39:2015 Installation code for metal roof and wall cladding.

Performance

Outdoor durability

MagnaFlow® products under normal well washed conditions of exposure, can be expected to show no cracking (other than that which may occur during forming), flaking or peeling of the paint film for 15 years from the date of installation.

Colour change during service will depend on the colour chosen, aspect, design of the structure and the environment.

The above are subject to minimum maintenance requirements (refer to minimum maintenance section).

Minimum maintenance

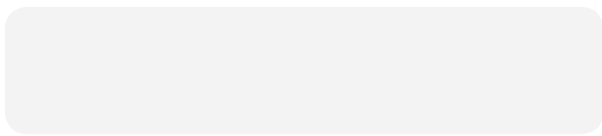
The service life is extended by regular washing. A mechanical wash every six months is recommended, more often if contaminants build up. At these times inspect for damage and failing fasteners, and repair these.

Unwashed areas

These are typically those areas that are not washed by natural rainfall, such as the underside of eaves, sheltered roofs or wall cladding, under solar panels etc. **These areas are excluded from warranty.** Stramit recommends the exclusion of unwashed areas by design wherever possible.

In cases where this is not possible, then a regular washing programme should be put in place. Contaminants should be removed by mechanical washing with water and a soft bristle brush at least every six months, or more frequently in severe environments or if contaminant build-up keeps occurring.

Colour availability



Off White



Armour Grey



Birch



Monolith



Slate Grey

Please check your local Stramit Office to confirm colour range availability.

Stramit Branches

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