

Design Flow Pty. Ltd.

**MATRIX LATTICE WORKS**

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## **Matrix Lattice Product Information**

The following information has been prepared to give you an understanding of the materials and manufacturing processes used to produce Matrix Lattice. We have also included some background information that covers recycling, installation and the benefits of Matrix lattice over timber lattice.

### **Material**

Matrix Lattice is made from one of the worlds most durable and versatile polymers called PolyPropylene (PP). Colourless polymer is blended with the master batch during moulding of the lattice. The master batch is a concentrate which consists of polymer, colour pigments and UV stabilisers. The colour pigments are organic based and are non-toxic. Powerful UV stabilisers allow Matrix Lattice to be exposed to direct sunlight for many years, which makes Matrix Lattice 'The Lattice That Lasts'.

### **Recycling**

Matrix Lattice is manufactured from Polypropylene, which is 100% recyclable. This means that Matrix Lattice could be recycled when no longer needed by simply re-compounding the material and adding UV stabiliser and antioxidants each time to replace the loss of those properties due to UV exposure. It is our company policy to continually search for suitable recycled materials of the correct specifications, and when such materials are available, we blend them into our production of the lattice. It is our aim to manufacture all Matrix Lattice from 100% recycled materials, and we will continue to strive toward this goal. This makes Matrix Lattice the best choice when you consider its quality combined with the use of recycled material. The addition of specially selected recycled material will not reduce our commitment to quality, and we support this with our 15-year structural warranty.

### **Production**

Matrix Lattice is injection moulded from polypropylene, which comes in small pellets about the size of rice grains. It is melted by heating in the injection moulding machine to about 250°C. While being heated, it is continuously being mixed with the master batch to evenly distribute the colour and UV stabilisers. It is then injected under extreme pressure into the mould, which produces a one-piece sheet of Matrix Lattice 2400 x 1200mm. The mould and the molten material are cooled by water, which freezes the material in the shape of the lattice. This manufacturing process is known as high-pressure injection moulding; it ensures a high quality finish, whilst also giving a precise and repeatable form of production. This manufacturing process uses electricity and gives off no harmful pollution from gases.

Matrix Lattice is Australian owned and made.

### **Benefits**

As mentioned above, Matrix Lattice is environmentally friendly and can be fully recycled. However, there are other additional benefits to using polymer lattice when compared to timber lattice. Treated pine lattice is not recyclable and harmful chemicals that are used to prolong the life of the timber can leach into the soil. It is also recommended that it should not be burnt because of the dangerous fumes it gives off.

Some better quality timber lattice is imported from Asia. This timber is from old growth forests, which cannot be replaced easily.

Another benefit of Matrix Lattice is that it will never require painting, because the colour is moulded all the way through the lattice. If the lattice is ever scratched or scuffed, damage is not obvious and can be repaired using a hot air gun.

Polypropylene is an ideal material for all outdoor applications because it is impervious to moisture and will not rot, mildew or separate. Once correctly installed, Matrix Lattice is maintenance free, except for an occasional hose-down to make it look new again.

## Installation

Matrix Lattice has been developed with a strong emphasis on the ease of installation. The tabs that are moulded around the perimeter of the lattice are designed to work with the two Matrix frame systems, the C-Channel and the Z-Capping. Both of these systems will hold Matrix Lattice securely while allowing it to expand and contract with the changes in ambient temperature. When correctly installed, these frames will allow for ambient temperatures from -10°C to +45°C.

The C-Channel is made from 1.15mm Galvanised steel which is powder coated to match Colorbond® steel colours. The Z-Capping is produced from Colorbond® steel and comes with a protective plastic cover, which is easy to remove after installation.

The frame systems have been specially designed to work with the Matrix Lattice tabs, which are located around the perimeter of the lattice. The frames have two functions. Firstly, to make the installation of the Matrix Lattice secure and aesthetically pleasing. Secondly, to allow for expansion and contraction of the lattice that takes place with the changes in ambient temperature.

However, if you wish to install the lattice in a timber frame, the tabs can be simply cut out, allowing the lattice to slip into a routed slot. This routed slot should be 20mm deep at the base and both sides of the frame, but allow a 35mm slot at the top. When fitting Matrix lattice into a timber frame, ensure that there is 6mm clearance on each side and 12mm at the top.

## Why Buy Matrix Lattice?

Lattice is used as a feature around the home and garden and may be chosen for many reasons. It may be used as a screen to secure privacy, as a fence to keep pets in or to mark a boundary, to provide a garden feature or shade. The current Australian market has been dominated by timber lattice for these applications. Timber lattice has a number of weaknesses: the new appearance soon fades to a dull grey, the staples begin to rust, and the timber, depending on the knots and grain structure, begins to fail. If you look around your area, you will see many homes with timber lattice. In most cases, the timber lattice has been installed to enhance the home and garden, but once it begins to age, it usually detracts from the quality of the home and garden it was meant to enhance. In some cases, the timber lattice has been installed with the addition of a timber frame, which improves the total appearance. Despite this, timber lattice never takes on a quality finish of Matrix Lattice. Even when people go to the trouble and cost of painting timber lattice, it is not long before staples have begun to rust, and at each intersection in the lattice rust starts to leach through the paint.

With Matrix Lattice, the only thing you need do to keep its new appearance is to give it a quick rinse with a hose occasionally to wash off the dust. Both of our recommended framing systems can be attached to a timber structure, but this means that there is still timber that will need some maintenance in future. We also supply a range of powder coated steel posts and post caps that will withstand the harsh Australian climate. Once installed, there is no comparison in the appearance and quality between timber and Matrix Lattice. Matrix Lattice will not rot or mildew, and is impervious to moisture or even submerging in water if required. One other advantage is that Matrix Lattice offers a much higher level of privacy compared to conventional timber lattice, and privacy is one of the key reasons lattice is installed. When you compare timber lattice to Matrix Lattice, you may see an initial price advantage for timber. Once you make a full cost appraisal including painting and replacement costs, you will realise that Matrix Lattice is a true investment in the value of your home and garden.

## Comparison of Matrix to Timber Lattice

### Matrix Lattice

15 year warranty

No painting required

Will not rust

Will not rot or mildew

High impact resistance

Will not separate

No knots

Can be recycled

No harmful chemicals

Manufactured from recycled material

### Timber Lattice

No warranty

Requires painting to improve appearance and durability

Staples will rust

Can rot and mildew

Low impact resistance

Can easily separate

Can have many knots

Cannot be recycled

Treated with harmful chemical which can leach out

Produced from plantation timber (most cases)

If you have any questions or comments in regard to this information, please visit our web site at [www.matrixlattice.com.au](http://www.matrixlattice.com.au) or contact us by phone, fax or e-mail.